THE FULFILLMENT OF THE DEMOCRATIZATION ROLE OF THE COMMUNITY COLLEGE

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Abstract of Dissertation Presented to the Graduate Council
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THE FULFILLMENT OF THE DEMOCRATIZATION ROLE OF THE COMMUNITY COLLEGE

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This study is an investigation of the role of the community college in the extension of educational opportunity to students of low socioeconomic status. The study identified a number of criticisms which appeared in the literature relative to the extent community colleges were extending educational opportunity to students of low socioeconomic status.

The validity of these selected criticisms was then studied by determining the extent 15 Florida community colleges had fulfilled the democratization role. Data were gathered by matching student information from the Florida Twelfth Grade Test, the Florida Board of Regents, the Florida Department of Commerce and the 15 community colleges by student social security number. A research group of 3,172 students was identified. Answers to the following questions were supplied:

1. What is the extent of representation of students of low socioeconomic status in community colleges in Florida?

2. What is the relationship between socioeconomic status and completion of the student's stated educational objective?

3. What is the relationship between socioeconomic status and transfer?

4. What is the relationship between socioeconomic status, employment and transfer to a senior university?

The results of data analysis of graduates of 15 selected Florida community colleges did not support the general criticisms that community colleges are not fulfilling their role in extending the democratization of education. In this study it was shown that

1. Students of low socioeconomic groups were proportionally represented in community college graduates.

2. Students of low socioeconomic groups continued their education at a senior university in proportion to the numbers that graduated.

3. Being of low socioeconomic status did not relate to achieving desired educational goals or participation in various university curricula.

The studies showed that more than 50% of the total number of community college graduates transferred to a senior university. Even though nontransfer and transfer catagories differed significantly in parental schooling and parental occupational socioeconomic status, more than 50% from each of these groups enrolled in a university.

CHAPTER I

INTRODUCTION

Background and Rationale

Education in the United States during the 1600's and 1700's was oriented toward religious training and the educating of the upper classes. It was not until the middle of the 1800's that education in this country began to develop the democratic philosophy which characterized it in the twentieth century (Power, 1962, chap. 15). Power referred to the period between 1820 and 1900 as the "American Educational Awakening" (1962, p. 563). He provided the following reasons for characterizing this period in that manner:

1. The development of a system of free public schools by 1840.

2. The extension of public education to include high schools.

3. The passage of the Morrill Act in 1862, creating the system of land grant colleges.

In 1848, Horace Mann wrote that free public education,

> beyond all other devices of human origin, is the great equalizer of the conditions of men . . . It does better than to disarm them of their hostility toward the rich; it prevents being poor. (cited in Katz, 1971, p. 141)

It was during this period of time, 1820-1900, that many of the philosophical positions relating to the value of education, the need for public education, and the equality of educational opportunity were developed. These positions have been used over the years to support public education and have been the underlying basis of many educational programs, and significant court interpretations (Stanley, Smith, Benne & Andersen, 1956, chap. 7).

Public community colleges owe much of their growth to the extension of this concept to higher education. James B. Conant writing in 1970 stated:

> The extension of the years of free education through the establishment of local two year colleges has been the expression of a new social policy of the nation, or perhaps I should say a further thrust of an old policy. For one could simplify the history of American public education in the last hundred years by noting the steps in the movement to make universal the opportunities hitherto open only to the well-to-do. First came the provision of elementary schooling at public expense; then came the free high schools and efforts to provide instruction for a wide variety of talents; lastly the growth of the equally comprehensive public two year college, the open door college, as it has been sometimes called. (Carnegie Commission, p. 11)

Roueche, Baker, and Brownell (1972) referred to the community college as "democracy's college" and said of the community college: "Its democratic style, positive philosophy, and social promise appealed to the American people and won great popularity and support" (p. 10). Leland Medsker wrote: "The two year college is the result of the social and economic forces which created it and shaped its character. Without doubt one of the forces is the growing belief that educational opportunity beyond high school must be equalized" (1960, p. 10). Medsker identified two other forces which influenced the growth of community colleges. They were "the inherent American desire to move from one social class to another," and the "faith which the American people have come to place in education" (p. 18). Cohen wrote: "The community junior college represents one of the few unique accomplishments of American education in the twentieth century-- expanded educational opportunity for all citizens" (1960, p. XV).

Writing about the community college, Medsker stated:

> Their location close to the home of potential students, their nonselective admissions policies, and their tendency to offer a variety of programs have made community colleges the most significant of all higher institutions in extending educational opportunity. The presence of a public two-year college in a community means that a much higher proportion of high school graduates from lower socioeconomic or ability levels can continue their education than could in a community with no college at all. (1971, p. 11)

The position taken by Medsker is supported by data relating to the growth of the community college. The number of public community colleges increased from 656 in 1960, to 1,100 in 1970 (Medsker and Tillery, 1971, p. 17). Between 1948 and 1968 community college student enrollments rose by over one million (Department of Health, Education and Welfare, 1970, p. 75). In the 70's, 50% of those completing high school participated in some type of post-secondary education. Nationally, one third of those entering higher education has started in a community college (Karabel, 1972) and in some states (e.g., Florida, California) almost two-thirds of the entering freshmen are in community colleges.

Based on the increased participation in higher education and the accessibility of community colleges, it would be reasonable to assume that community colleges are in fact extending the opportunity to participate in higher education to all those who could benefit. A substantial body of knowledge supports this assumption (Cross, 1968; Medsker & Trent, 1965; Willingham, 1970). Studies, however, have been reported which contradict this assumption (Bowles & Gintis, 1976; Clark, 1960; Folger, Astin, & Bayer, 1970; Jaffe & Adams, 1972; Karabel, 1972). These studies raise a number of questions concerning the extent to which community colleges are meeting the needs of students of low socioeconomic status and minority group members. Karabel (1972) wrote:

> The community college, generally viewed as the leading edge of an open and egalitarian system of higher education, is in reality a prime contemporary expression of the dual historical patterns of class-based tracking and of educational inflation. (p. 526)

The Folger Commission summarized its findings regarding socioeconomic status and community college students progress as follows:

> Paradoxically, the community colleges appear to have increased college opportunity for low-status youth, and at the same time to have increased socioeconomic differentials in college completion. They have been successful in getting low-income youth into college, but have not increased their chances of getting a degree nearly as much. (Folger, Astin, & Bayer, 1970, p. 39)

Jaffe and Adams (1972) pointed out that, while the number of students attending community colleges has increased substantially, there has not been a corresponding logical increase in the number of people obtaining bachelor degrees. Bowles and Gintis (1976) proposed that community colleges were developed to keep large numbers of low socioeconomic status students from participating in the educational institutions of the elite.

These authors have been critical of the extent to which community colleges have been able to fulfill one of their major roles. They expressed concern that the community colleges have not been extending educational opportunity to low socioeconomic status students (SES) beyond entrance into the community college. They also expressed concern that the community colleges have not been providing opportunities for upward social mobility which has been identified as one of the major reasons behind the growth of community colleges. Their criticism relative to the community college and low SES students can be summarized as follows:

1. Low SES students are not adequately represented among community college graduates.

2. Low SES community college graduates do not continue their education at a senior university or college in proportion to the numbers that graduate.

3. Low SES students who do transfer are not adequately represented among the various college curricula.

4. Low SES students are overrepresented in terminal degree programs.

The philosophical base shared by these critics appears to include the following elements:

1. A hierarchy of educational opportunity exists related to the type of college or university attended.

2. A bachelor's degree is a valid objective for all community college students.

3. Reorientation of students is basically wrong.

4. Vocational or occupational training is less desirable or socially worthwhile than academic training.

Literature exists in the field of community college education which could be used to contradict these basic assumptions. This study did not address the validity of these assumptions but addressed the criticisms directly. These authors have raised questions which have been taken up by legislators, taxpayers, consumers, and community college personnel. By avoiding the philosophical argument it was possible to develop objective data which could be used to assist in determining the validity of these criticisms. Data were gathered from community college graduates in the State of Florida and were analyzed to determine the extent they supported these criticisms.

Florida was chosen because of its recognition as one of the states with a large comprehensive program (Medsker and Tillery, 1971, p. 22). This identification was supported by the following information relative to Florida's program:

1. Florida had an extensive system of 28 community colleges.

2. A community college was located within commuting distance of 99 percent of the state's population.

3. The 1971 Articulation Agreement assured the transferability of Associate of Arts degrees to public senior universities within the state.

4. Public community colleges provided for approximately two-thirds of first-time college enrollments in the state.

5. The number of community college transfer students had grown from an insignificant number in 1956 to over 30,000 in 1975.

6. The Florida system was an open-admission system requiring only a high school diploma or the equivalent for admission (Division of Community Colleges, 1977, pp. 1-19).

The Florida system, therefore, should be a system which facilitates the extension of educational opportunity to low socioeconomic students. The results obtained by analyzing the data for this state would be significant in relation to determining the validity of these criticisms in general.

The Problem

Statement of the Problem

The problem investigated in this study was to determine the extent to which community colleges are fulfilling their role in providing educational opportunity to low SES students. Specifically this study determined to what extent this role was being met as determined by data gathered relative to Florida community college graduates for the academic year

1975-76. Answers to the following questions were supplied:

1. What is the extent of representation of low SES students in Florida community colleges?

2. What is the relationship between students' SES and completion of their stated educational objective?

3. What is the relationship between students' SES and transfer to

    a. a senior university?

    b. a senior university within 50 miles of home?

    c. the various curricula within the university?

4. What is the relationship between students' SES, employment, and transfer to a senior university?

Where appropriate, these questions were further answered considering student socioeconomic status, race, and sex. The data collected were analyzed to determine whether they did or did not support the selected criticisms which were identified.

Delimitations and Limitations

The study was subject to the following population confinements by gathering data only about students who:

1. graduated from one of the 15 selected Florida community colleges during the academic year 1975-76 and who participated in the Florida Twelfth Grade testing program.

2. transferred to one of the Florida senior universities.

The 15 colleges were selected because of their participation in the Florida Inter-Institutional Research Council. They are located throughout the state and are representative in size, geographic location, and program offerings for the state as a whole.

Justification for the Study

This study added to the growing body of knowledge relating to community college accountability. It particularly related to questions raised by Clark (1960), Folger (1970), Karabel (1972), Bowles and Gintis (1976), who questioned the effectiveness of community colleges in providing opportunities for social mobility. In addition, it should provide information to the 15 participating community colleges and the senior universities that participated by providing information for measuring their own accountability.

This study related to areas of suggested research identified by the American Association of Junior and Community Colleges and the Florida Division of Community Colleges. It specifically provided information requested by the Florida Division of Vocational Education and the Florida Division of Community Colleges.

This study was one of a number of studies which were conducted by the Inter-Institutional Research Council which focused on community college accountability as related to human capital and manpower. Other studies included (a) follow-up studies of community college graduates relative to later college graduation; (b) employment characteristics of Associate in Science graduates; and (c) cost benefit studies in relation to tax monies returned.

Assumptions

The assumptions applicable to this study included

1. the accuracy of student self-reported information relative to

    (a) parental income

    (b) parental educational background

    (c) parental employment;

2. the accuracy of community college, university, and Department of Commerce data tapes;

3. and adequate representation of low SES students among these students who participated in Florida Twelfth Grade Testing Program.

Prior to making the overlying assumption of the accuracy of student self-reported data, the literature was reviewed to determine the reported accuracy of this type of information. In a research monograph Leonard Baird (1976) summarized the research literature from 1937 through 1971 relative to this topic. His findings support the accuracy of self-reported information. In a sampling of college students, Baird stated, "Self-reports seem to be accurate when they deal with matters that are fairly recent, relevant to a person's interests and concerns, varifiable, and . . . phrased in the best way" (1976, p. 4). Baird pointed out that numerous studies have shown self-reported data to be as accurate as more extensive and expensive tests in similar areas.

Definition of Terms

For the purpose of this study, the following terms will be used in the following context:

Associate of Arts degree. The basic two-year degree awarded by community colleges to those who have completed a program designed for preparing students for transfer to a senior university or college. Commonly referred to as an AA degree.

Associate in Science degree. The basic two-year degree awarded by community colleges to those students who have completed a program designed for preparing students for direct entrance into employment. Commonly referred to as an AS degree.

"Cooling out." The reorientation of community college students from their original educational objectives to terminal curricula or into the labor market.

Grade-point average. The ratio of quality points to hours attempted using the semester hour and the four point scale as a base.

Graduate. A recipient of either an AA or AS degree from one of the 15 participating community colleges.

Meritocracy. The concept that the student should participate in higher education based on merit rather than family background.

Open door. The concept that all students regardless of ability, educational background, or family status should be eligible for admission to higher education.

Outside employment. Employment while attending one of the 15 community colleges based on information available from the Department of Commerce data tapes.

Parental educational level. A measure of parental educational achievement for students identified in this study based on student-reported data of number of years completed.

Parental income level. A measure of parent income for students identified in this study based on student-reported data of family income.

Parental occupation level. A measure of parental occupational status for students identified in this study based on student-reported data of father's and mother's general occupational classification.

Social mobility. The movement of people from one status level to another within the social class system.

Socioeconomic status. The relative position of a student or family in the social class system of United States society as determined by family income, parental educational level, and parental occupation.

Terminal program. A community college instructional program which is vocationally oriented and is not designed for transfer to a senior university.

Tracking. The establishment of curriculum paths which channel students into specific levels of educational or vocational achievement, thereby limiting some and retarding others.

College program. Colleges within the university system such as the college of education and the college of archi-tecture, which were identified as available at Florida senior universities.

Procedures

The procedures for this study involved three major phases. The first phase was a thorough review of the literature. The second phase of data collection included the identification, and the collection of the appropriate information from a variety of data bases. The third data phase involved the treatment of the data.

Literature Review

The literature review included

1. the historical perspective of equality of educational opportunity;
2. the historical perspective of education and social mobility;
3. early studies related to education and social mobility;
4. research relative to the role of community colleges in providing opportunities for educational equality;
5. discussion of research relative to SES and community college attendance; and
6. the identification and research related to major criticism of the role of community colleges in providing opportunities for social mobility.

Data Collection

The data collection phase involved the following procedures:

1. the identification of the appropriate data elements necessary for answering the research questions;

2. the identification of the appropriate data bases from which to select the required information; and

3. the classification and standardization of data from the various sources in order that the data may be treated appropriately.

Data required for this study were compiled by merging data (on the basis of social security numbers) from community colleges, universities, the Florida Department of Commerce and the Florida Statewide Testing Program. Specifically, data tapes were supplied by 15 Florida community colleges, all Florida senior universities, the Florida Statewide Testing Program and the Florida Department of Commerce. The research population consisted of 1975-1976 community college graduates who had taken the Florida Twelfth Grade Test in 1971, 1972 or 1973. Student SES was determined by using responses from Florida Twelfth Grade Test data.

Treatment of Data

Statistical data treatment consisted of cross tabulation of data elements by the statistical package for the social sciences, and the presentation of the results in simple percentages, and the chi-square.

Organization of the Research Report

The study is reported in four chapters. The first chapter included the background and rational statement of problem, delimitations and limitations, justification of the study, assumptions, definitions of terms, and procedures. Chapter two includes the review of literature and research related to the problem, and the identification of criticism of the community college relative to social mobility. Chapter three includes results and discussion. Chapter four deals with conclusions and implications for further research.

CHAPTER II

REVIEW OF LITERATURE

Historical Background

The concept of equality of educational opportunity has a long history as a major philosophical position in American culture. It has its origin in the philosophy of John Locke, whose work influenced the leaders of the American Revolution. Locke felt that experience was the most significant factor in determining the differences of men. In the eighteenth century education was identified as being able to provide a common base of experience and thereby creating equality among men (Thayer & Levitt, 1966). Horace Mann spoke of education as the great equalizer (Katz, 1971, p. 141). James Truslow Adams, in 1931, wrote that the American dream:

> . . . of a land in which life should be better and richer and fuller for every man, with an opportunity for each according to his ability or achievement. . . . It is not a dream of motor cars and high wages merely, but a dream of a social order in which each man and each woman shall be able to attain the fullest stature of which they are innately capable. (p. 404)

Through the 1800's the concept of free public schools extended from elementary schools to high schools and in 1860 twenty states had free or relatively free public universities. The 1947 President's Commission on Higher Education supported this position by its statement, "Equal educational opportunity for all persons, to the maximum of their individual abilities and without regard to economic status, race, creed, color, sex, national origin or ancestry, is a major goal of American Democracy" (p. 3).

Writing of open admissions in 1970, Senator Wayne Morse stated:

> Adults of each generation owe their offspring a great moral obligation: the obligation of providing, as a matter of right, to each boy and girl the opportunity to develop to the maximum extent possible the intellectual potential of that boy or girl. The right is accrued to the child no matter where he or she was born, irrespective of the economic status of the parents or the color of the child's skin. (1971, p. 6)

Senator Morse was writing on the basis of his perception of the ever increasing demand by people of all social classes to participate in higher education. He strongly supported the position of open admissions and advocated the support of this policy based on the concept of equality and the benefit to society in raising the educational level of the labor force. His support extended to the commitment of national resources to this end. The value of an education, both to the individual and to society, has been identified by a number of authors (Alexander, 1976; Blan & Duncan, 1967; Schultz, 1971).

James Thornton (1960) defined "The American Dream" as "the belief inbread in every stratum of society that education is a social and indivudual good and that society is obligated to provide as much of it as any individual desires and can profit from," and added that "the junior college is one of the practical results of the interaction of these forces" (p. 45). He summarized the role of the community college as follows:

> 1. To make higher education available to qualified students of all ages, all social classes, all varieties of ability.
>
> 2. To develop a sufficient variety of curricula to meet the educational needs, at this level, of the community and of the individual student.
>
> 3. To provide counseling and guidance services to help students choose appropriately from the available offerings.
>
> 4. To devote concerted attention to effective teaching.
>
> 5. To require the highest standards of achievement of its students. (p. 43)

The combination of the American dream relative to education and the basic concepts on which the community college movement was founded have led to the concept of open enrollment. Parents and students from low socioeconomic status look to the community college as their opportunity to participate in higher education and the benefits associated with it. Rouche, Baker, and Brownell wrote, "Community colleges have become the primary vehicle for social and economic advancement for the lower two-thirds of the population" (p. 11). The students who have come to attend the community college have been described as the "new students." Cross (1971) identified the students' backgrounds as characterized by low socioeconomic status, low educational achievement, minority group status, and lack of educational discipline.

The large enrollments in public community colleges and the increasing cost of education have brought an increased demand for accountability (Rouche, et al., 1972, p. 3). This emphasis on accountability has drawn attention to measuring one of the major goals of community colleges. That goal is the extension of education to students of low socioeconomic status and assistance to this group in the process of upward social mobility.

In the 1930's and 1940's there was a great deal of interest on the part of sociologists in the basic field of social stratification. During this period a number of classic studies were completed (Lynd, 1929; Warner, 1941; Hollingshead, 1949) which dealt with the impact of education on social mobility and college attendance. These studies basically identified college attendance as being characteristic of students of upper socioeconomic status and the fact that education was dominated by the middle class. They did, however, identify education as increasing a student's chance for upward mobility and as something valuable.

Role of the Community College

The studies of the 1930's and 1940's were basically descriptive in nature. During the 1950's and 1960's sociologists again looked at education and socioeconomic status. For example, Havighurst and Neugarten (1962) found that four-fifths of high school graduates from the upper and middle classes enter college while only one-fifth from the upper lower class and less than one-tenth from the lower lower class enter college (p. 233). These studies were basically statistical treatments of who goes to college, who completes the program, the effect of education on employment, and the relationships between education and a number of other population characteristics (Clark, 1976). During the 1960's two major studies were completed which helped identify who was going to college. The first of these, Project Talent, involved 62,602 high school seniors. The second study, Scope, collected information on 33,879 high school students (Cross, 1971, pp. 175-181). These and earlier studies basically reported what the authors found, without making any value judgments. More recent studies, however, challenged more basic concepts relative to equality of educational opportunity and the value of education in general (Berg, 1974; Bowles & Gintis, 1976; Clark, 1960; Karabel, 1972). A number of these studies related directly to the role of the community colleges.

Bowles and Gintis (1976) viewed the educational system as not responsive to the needs of students of low socioeconomic status. They stated, "The system as it stands today provides eloquent testimony to the ability of the well-to-do to perpetuate, in the name of equality of opportunity, an arrangement which consistently yields to themselves disproportional advantages" (1976, p. 30). Their criticism of the educational system extends to the community college which they identify as an extension of the class-based tracking system of high schools to the area of higher education.

Lauter and Howe (1972) provided a description of the extension of tracking to the community college and its effect on social mobility. Karabel (1972) described the effect of this hierarchical differentiation within higher education:

> The community colleges leave the principle of achievement intact by enabling the state colleges and universities to deny access to those citizens who do not meet their qualifications. The latent ideology of the community college movement thus suggests that everyone should have an opportunity to attain elite status, but, that once they have had a chance to prove themselves, an unequal distribution of rewards is acceptable. By their ideology, by their position in the implicit tracking system of higher education--indeed by their relationship to the larger class structure--the community college lends affirmation to the merit principle, which while facilitating individual upward mobility, diverts attention from the underlying question of distributive justice. (p. 524)

Bowles and Gintis (1976) described the system of meritocracy, which developed around the attendance at universities as opposed to community colleges, as artificial. They state:

> The predatory competitive, and personally destructive way in which intellectual achievement is rewarded in U.S. schools and colleges is a monument not to creative rationality, but to the need of a privileged class to justify an irrational, exploitive and undemocratic system. (1976, p. 108)

They view the educational system as it is established as having the primary function of the continuation of the present stratified labor force.

Sewell (1971) reported a study of 9,000 students from which he determined "selective influences of socioeconomic background and sex operate independently of ability at every stage in the process of educational attainment" (p. 794).

Burton Clark (1960) describes one of the major functions of community colleges as that of "cooling out" students. He described the community colleges much like Bowles and Gintis. He viewed their development as a release of the pressure from students of low socioeconomic status to enter higher education. Once the students are admitted, he saw the role of the community college as channeling students away from their desired goal of a college degree and into vocational or terminal programs, or back into the labor market. Having the opportunity to compete, however, reduces the student's sense of failure and frustration. Clark's position is supported by Karabel (1972, p. 532) in that he reports only half of the community college students receive any kind of degree.

Describing the role of the community college, Clark wrote:

> The dilemma of this role, however is that it needs to remain reasonably latent, not clearly perceived and understood by prospective clientele. Should the function become obvious, the ability of the junior college to perform it would be impaired. The realization that the junior college is a place where students reach undesired destinations would turn the pressure for college admissions back on the protected colleges. The widespread identification of the junior college as principally a transfer station, aided by the ambiguity of the 'community college'label, helps keep the role reasonably opaque to public scrutiny. (p. 165)

The position taken by Clark is shared by Eckland (1964). He found that the community college, because of its role, may screen out more marginal students than four-year colleges. Similar results were found by Jaffe and Adams (1972) who reported the failure of community colleges to increase the number of bachelor degrees awarded annually The report of the Folger Commission (1970, p. 319) also showed that students who entered directly into a four-year college had higher persistence rates than community college students (holding socioeconomic status constant).

Karabel (1972) wrote of the pronounced class bias in community college vocational program enrollment. Similar data were gathered by Patricia Cross (1970, p. 191) in her study of 63 comprehensive community colleges. Cicourel and Kitsuse (1963) identified this as primarily a function of counselor perceptions of students of low socioeconomic and minority group status. Clark (1960) saw it as the end product of one of the steps in the "cooling out" process called reorientation. Regardless of the cause, it is definitely viewed as limiting the ability of these groups to substantially change their socioeconomic status. Karabel (1972) wrote:

> This push toward vocational training in the community college has been sponsored by a national educational planning elite whose social composition, outlook, and policy proposals are reflective of the interests of the more privileged of our society. Notably absent among those pressuring for more occupational training in the junior colleges have been the students themselves. (p. 552)

Zwerling (1976) wrote "Instead of blunting the pyramid of the American social and economic structure the community college plays an essential role in maintaining it" (p. xvii). Zwerling claimed the hidden function of community colleges is to maintain young people in the same relative social position as their parents. Zwerling used information obtained from Christopher Jencks and David Riesman's Academic Revolution and the Carnegie Commission on Higher Education report The Open-Door Colleges to show that those most benefiting from the community college were upper and middle class youth (1976, p. 33). In a later report the commission stated "the lowest income groups have a larger share of. . . dependents (8.4%) than the share of the higher education benefits they receive (4.9%), while the over $15,000 group receives an estimated 27.6% of subsidy benefits for its 16.4% of the 18 to 24 year old group" (Carnegie Commission, 1973, p. 37).

Writing about Florida community colleges, Zwerling stated:

> If we look at Florida's system of community colleges which has substantial popular support because of its supposed ability to provide greater opportunity to a wider range of students, one finds that because the state provides a larger share of the total cost--financial from more regressive taxes than these forming the basis for federal support--the effect of the way two-year colleges are financed is more regressive than the way universities are financed. (1976, p. 120)

Zwerling further stated that Florida's system of higher education "is one in which the 'poor' are sending the 'rich' through college"(1976, p. 120).

Relative Florida Research

In order to interpret the data which were developed it was necessary to understand selected population characteristics of the state at the time of the study. Data have been abstracted and presented which provide a base for further comparison.

The 1974 Florida Statistical Abstract provides the following information about household income in 1969.

Table 1
Household Income
N=2,294,782

Less than 3000	3000 to 7499	7500 to 14,999	15,000 or more
469,465	734,532	756,611	324,174
	Percent of Total		
20.5%	32%	33%	14%

(Source: Florida Statistical Abstract 1974, p. 124)

The 1974 Abstract also provided the following information about high school graduates attending college and the types of college attended.

Table 2
Number and Proportion of Florida High School Graduates Entering Community Colleges and Four-Year Colleges and Universities: 1971 Through 1973

	Graduates from Public High School		
	Number	Percentage Entering--	
Year	Entering College	Community College	Four-Year Institution
1971	39,920	59.09	40.91
1972	38,658	58.90	41.10
1973	37,471	58.19	41.81

(Source: Bureau of Economic & Business Research, 1974, p. 124)

In 1971, the Florida Board of Regents and the Division of Community Colleges cooperated in a survey of senior university students and entering community college students. The authors stated that although the number of students in the study did not represent the total number of students, the percentage of responses was large enough to be indicative of the responses of the total population (Board of Regents, 1972, p. 1).

Reported were analyses of family income, parental educational levels and parental occupational levels. These are summarized in the following tables:

Table 3
Entering Community College Students
Estimate of Family Annual Income: N=18,387

Below $3,000	794	4.3%
3,000 to 5,999	1895	10.3%
6,000 to 7,499	1655	9.0%
7,500 to 8,999	1663	9.0%
9,000 to 11,999	3351	18.2%
12,000 to 19,000	3448	18.8%
above 20,000	1461	9.0%
cannot estimate	3413	18.6%
blank	703	3.8%
invalid	4	.0%

(Source. Characteristics of College Students, 1971, Survey of Florida's Community College, Florida Board of Regents, Tallahassee, 1972, p. 2)

Table 4
Public University Students Estimate of Family Income
Entering Directly from High School N=5225

Below $3,000	205	3.9%
3,000 to 5,999	381	7.3%
6,000 to 7,499	331	6.3%
7,500 to 8,999	427	8.2%
9,000 to 11,999	981	18.8%
12,000 to 19,999	1137	21.8%
above 20,000	825	15.8%
cannot estimate	795	15.2%
blank	136	2.6%
invalid	7	.1%

(Source. Characteristics of College Students, 1971, Survey of Florida's Public Universities, Florida Board of Regents, Tallahassee, 1972, p. 140)

Table 5
Public University Students Estimate of Family Income
Transfers from 2 Year Schools N=3061

Below $3,000	157	5.1%
3,000 to 5,999	425	13.9%
6,000 to 7,499	361	11.8%
7,500 to 8,999	381	12.5%
9,000 to 11,999	653	21.3%
12,000 to 19,000	542	17.7%
above 20,000	201	6.6%
cannot estimate	276	9.0%
blank	65	2.1%

(Source. Characteristics of College Students, 1971, Survey of Florida's Public Universities, Florida Board of Regents, Tallahassee, 1972, p. 153)

Table 6
Community College Entering Students
Parental Educational Level N=18,387

Grade Completed	Father	%	Mother	%
Eighth Grade or Less	2311	12.6	1449	7.9
Some High School, but Did Not Graduate	2574	14.0	2676	14.6
Completed High School	6714	36.5	9079	49.4
Completed Two Years College	2718	14.8	2614	14.2
Received Bachelors Degree	1724	9.4	1055	5.7
Completed Professional Training	1031	5.6	785	4.3
Did Post-Graduate Study	675	3.7	327	1.8
Blank	638	3.5	401	2.2
Invalid	2	0	1	0

(Source. Characteristics of College Students, 1971, Survey of Florida's Community Colleges, Florida Board of Regents, Tallahassee, 1972, p. 4)

Table 7
Public University Students
Entering Directly from High School
Parental Educational Level N=5225

Grade Completed	Father	%	Mother	%
Eighth Grade or Less	326	6.2	173	3.3
Some High School, But Did Not Graduate	427	8.2	426	8.2
Completed High School	1591	30.5	2417	46.3
Completed Two Year College	894	17.1	994	19.0
Received Bachelor Degree	968	18.5	689	13.2
Completed Professional Training	466	8.9	251	4.8
Did Post-Graduate Study	485	9.3	61	1.2
Blank	63	1.2	214	4.1
Invalid	5	.1	0	0

(Source. Characteristics of College Students, 1971, Survey of Florida's Public Universities, Florida Board of Regents, Tallahassee, Florida, 1972, p. 140-141)

Table 8
Public University
Entering Two Year Transfers
Parental Educational Level N=3061

Grade Completed	Father	%	Mother	%
Eighth Grade or Less	375	12.3	232	7.6
Some High School But Did Not Graduate	378	12.4	411	13.4
Completed High School	1238	40.4	1580	51.6
Completed Two Year College	449	14.7	442	14.4
Received Bachelor Degree	291	9.5	203	6.6
Completed Professional Training	166	5.4	104	3.4
Did Post-Graduate Study	130	4.3	32	1.1
Blank	34	1.1	57	1.9
Invalid	0	0	0	0

(Source. Characteristics of College Students, 1971, Survey of Florida's Public Universities, Florida Board of Regents, Tallahassee, 1972, p. 153-154)

The Florida Statewide Twelfth Grade Testing Program was established in the state in 1939. It was a compulsory testing program administered by the high schools of the state and given to all seniors. The program included a voluntary student questionnaire which provided a variety of student background information. Information from this questionnaire for the year 1973 was selected to be presented on a statewide basis. The summary data for selected items of the questionnaire can be found in Appendix A.

Table 9
Estimate of Family Income
N=63,841

Income		Percentage of Total
Less than $3,000	3431	05
3,000 to 5,999	6993	10
6,000 to 7,499	6508	10
7,500 to 8,999	5880	09
9,000 to 10,499	7243	11
10,500 to 11,999	6553	10
12,000 to 13,499	6342	09
13,500 to 14,999	4611	07
15,000 to 18,000	6294	09
over 18,000	9986	15

(Source. Florida 12th Grade Test Summary Data, 1973, Appendix A.)

Table 10
Father's Occupation
N=68,163

Occupation		Percentage of Total
Skilled Work	24,885	36
Service or Household Work, Manual Labor, Factory Work	3,533	05
Clerical or Sales Work	3,701	05
Civil Service Work	3,333	04
Self-employed or Business Management	17,238	25
Professional or Technical	12,750	18
Unknown	2,547	03

(Source. Florida 12th Grade Test Summary Data, 1973, Appendix A.)

Table 11
Mother's Occupation
N=68,302

Occupation		Percentage of Total
Skilled Work	6,357	09
Service or Household Work, Manual Labor, Factory	9,073	13
Clerical or Sales Work	16,370	23
Civil Service Work	660	0
Homemaking	19,860	29
Self-employed or Business Management	4,104	06
Professional or Technical	8,916	13
Unknown	2,962	04

(Source. Florida 12th Grade Test Summary Data, 1973, Appendix A.

Table 12
Parental Educational Level
N=69,794

Educational Level	Mother	%	Father	%
No Formal Schooling	227	0	405	0
Some Elementary	1,150	01	2,485	03

Table 12 (continued)

Parental Educational Level	Mother	%	Father	%
Finished Elementary	1,471	02	2,159	03
Some High School	11,894	17	10,779	15
Finished High School	25,579	39	18,786	27
Business or Trade School	4,409	06	4,363	06
Some College	9,140	13	9,167	13
Finished College	6,876	09	9,561	13
Attended Graduate or Professional School	1,686	02	1,941	02
Attained a Graduate or Professional Degree	2,158	03	4,920	07
Unknown	3,204	04	4,809	06

(Source. Florida 12th Grade Test Summary Data, 1973, Appendix A.)

The Florida Division of Community Colleges in 1977 published information which provided summary data on the articulation of community college students with the state's senior universities. The authors of the study stated "a major function of Florida's community colleges is to provide the curricula through which students may prepare themselves for entry into the universities upper division colleges" (Division of Community Colleges, 1977, p. 1). Information from this study has been provided which will provide a basis for later analysis.

Table 13
Florida Community College Transfer Students Attending Florida Public Universities, By Major Fall 1976

Major	N	% Total
Agriculture	339	.01
Architecture	364	.01
Area Studies	22	less than .01
Biological Studies	919	.04
Business	5594	.23
Communications	755	.03
Computer Science	350	.01
Education	4611	.19
Engineering	1780	.07
Fine Arts	932	.04
Foreign Languages	119	less than .01
Health Professions	1277	.05
Home Economics	268	.01
Law	5	Less than .01
Letters	721	.03
Library Science	35	less than .01
Mathematics	175	less than .01
Physical Science	545	.02
Psychology	1183	.05
Public Affairs	1816	.07
Social Studies	2034	.08
Interdisciplinary	426	.02
Unclassified	300	.01
Total	24570	

(Source. Division of Community Colleges, Articulation, 1977, p. 36.)

Summary

This study reviewed the literature and identified a number of criticisms relative to the extent community colleges were fulfilling their role in the democratization of higher education. Criticisms were identified which were subject to empirical investigation. It was recognized that material exists that contradicts the position held by these authors. It was also recognized that the philosophical position held by these authors is subject to challenge. Much literature has been published about the community college's role in providing vocational-technical education and in assisting youth in choosing realistic educational objectives. With this in mind, however, it was felt that it was important to address the criticism directly and develop data which assists in determining the validity of the criticisms using the writers' definitions.

Florida data were presented which provide the reader with information which will assist in determining the validity of the selected criticism as they relate to the research group identified.

This study will add to the literature concerning the accountability of community colleges. Specifically, it will assist in measuring the extent to which community colleges are meeting one of the major roles (the democratization of education) which has been identified with their development. This was done by using existing information on Florida community college graduates and relating the various data elements in a manner not previously reported.

CHAPTER III

RESULTS AND DISCUSSION

This chapter is divided into two sections. The first section provides descriptive data of the community college graduated students included in the study. The second section presents the results of several data analyses related to the questions proposed in this study.

The presentation of the results indicates statistical significance of the relationship using the Chi Square technique at the .05 or .01 level. Beyond this, however, the discussion includes an interpretation of the data relative to its practical significance. Because of the large number of cases included in the data, often statistically significant relationships were found which had little or no practical significance.

Data Elements Included in the Study

Matching social security numbers of 1975-76 graduated students from 15 selected community colleges with the Florida Twelfth Grade Test tapes for a period of three years, resulted in 3,172 cases. These were subsequently matched with the Florida Board of Regents' student data course files and the Florida Department of Commerce data tapes in order to determine the longitudinal movement of the population.

Table 14 shows data sources, data elements, data element values and the student distribution for socioeconomic measures used in the

Table 14

Socioeconomic Status Measure Variables

Source	Data Element	Value	N	%
Twelfth Grade Test	Family Income Level	0-5999	299	10.8
		6000-8999	462	16.7
		9000-11,999	659	23.8
		12,000-14,999	578	20.9
		15,000 and over	769	27.8
		Missing observations	401	--
	Father's Schooling	Less than high school graduate	436	14.9
		Completed high school	773	26.4
		Business or trade school	760	25.9
		Completed college	544	18.5
		More than 4 years	420	14.3
		Missing observations	239	--
	Mother's Schooling	Business or trade school	745	24.8
		Completed college	383	12.7
		More than 4 years	218	7.2
		Missing observations	165	--
	Father's Occupation	Manual work, service work, housewife	141	4.6
		Clerical, sales work	272	8.9
		Skilled work, civil service work	1037	34.0
		Self-employed	855	28.0
		Technical	746	24.5
		Missing observations	121	--

Table 14--Continued

Source	Data Element	Value	N	%
Twelfth Grade Test	Mother's Occupation	Manual work, service work, labor, housewife, clerical, sales work	946	30.8
		Skilled work, civil service work	231	7.5
		Self-employed	144	4.7
		Professional, technical	493	16.1
		Missing observations	102	

data analysis. An extended description of other related data elements is provided in Appendix B.

Socioeconomic status measures used in this study were family income, parental schooling and parental occupation. Tables 15 through 19 show these data in relation to 15 community colleges in the research group. This information shows the extent to which these community colleges were serving low SES students.

It can be observed from these tables that the relationship between each SES measure and community college attended was statistically significant at the .01 level. Colleges 5, 7, 9, and 15 were found to be serving larger percentages of low SES students than other colleges. Over 50% of all the students in the lowest category of each of these SES measures attended one of these four schools. It is interesting to note that these colleges serve the large metropolitan areas of the state.

It was beyond the design of this study to try to determine the reason for this distribution. Possible explanations that should be explored in future research include the concentration of low SES students in metropolitan areas and the availability of mass transportation in these areas.

By comparing the summary data of the three socioeconomic measures shown in Tables 15 through 19 with the 1971 summary data of Characteristics of College Students reported in Chapter II, it can be seen that distribution of these variables was similar. Also the overall Florida Statewide Testing Program of twelfth grade students for the year 1973 (reported in Chapter II) had a similar distribution.

Table 15

Relationship of Family Income and Community College Code

College Code	0-5999			6000-8999			9000-11,999			12,000-14,999			15,000 and over			Row	
	N	Row %	Col. %	N	Row %	Col. %	N	Row %	Col. %	N	Row %	Col. %	N	Row %	Col. %	Total	%
1	14	4.9	4.7	53	18.5	11.5	69	24.1	10.5	67	23.4	11.6	83	29.0	10.8	286	10.3
2	17	7.9	5.7	25	11.7	5.4	54	25.2	8.2	48	22.4	8.3	70	32.7	9.1	214	7.7
3	14	20.6	4.7	21	30.9	4.5	11	16.2	1.7	13	19.1	2.2	9	13.2	1.2	68	2.5
4	8	10.1	2.7	19	24.1	4.1	15	19.0	2.3	17	21.5	2.9	20	25.3	2.6	79	2.9
5	15	5.7	5.0	34	13.0	7.4	67	25.7	10.2	58	22.2	10.0	87	33.3	11.3	261	9.4
6	3	27.3	1.0	1	9.1	0.2	3	27.3	0.5	1	9.1	0.2	3	27.3	0.4	11	0.4
7	28	14.5	9.4	27	14.0	5.8	41	21.2	6.2	44	22.8	7.6	53	27.5	6.9	193	7.0
8	10	6.1	3.3	22	13.5	4.8	48	29.4	7.3	43	26.4	7.4	40	24.5	5.2	163	5.9
9	125	14.0	41.8	162	18.1	35.1	206	23.0	31.3	173	19.3	29.9	229	25.6	29.8	895	32.3
10	10	20.8	3.3	10	20.8	2.2	13	27.1	2.0	7	14.6	1.2	8	16.7	1.0	48	1.7
11	11	6.5	3.7	27	16.0	5.8	45	26.6	6.8	30	17.8	5.2	56	33.1	7.3	169	6.1
12	8	24.2	2.7	8	24.2	1.7	5	15.2	0.8	4	12.1	0.7	8	24.2	1.0	33	1.2
13	11	11.2	3.7	15	15.3	3.2	21	21.4	3.2	22	22.4	3.8	29	29.6	3.8	98	3.5
14	6	8.6	2.0	9	12.9	1.9	16	22.9	2.4	11	15.7	1.9	28	40.0	3.6	70	2.5
15	19	10.6	5.4	29	16.2	6.3	45	25.1	6.8	40	22.3	6.9	46	25.7	6.0	179	6.5
Column Total	299			462			659			578			769			2767	
%	10.8			16.7			23.8			20.9			27.8			100.0	

Chi Square = 114.35876 with 56 Degrees of Freedom
Significance = .0000
Missing Observations = 405

Table 16
Relationship of Father's Schooling and Community College Code

College Code	Less Than High School			Completed High School			Business or Trade School			Completed College			More Than 4 Years			Row	
	N	Row %	Col. %	N	Row %	Col. %	N	Row %	Col. %	N	Row %	Col. %	N	Row %	Col. %	Total	%
1	26	8.6	6.0	63	20.8	8.2	87	28.7	11.4	68	22.4	12.5	59	19.5	14.0	303	10.3
2	37	15.9	8.5	58	24.9	7.5	59	25.3	7.8	50	21.5	9.2	29	12.4	6.9	233	7.9
3	12	16.4	2.8	29	39.7	3.8	23	31.5	3.0	6	8.2	1.1	3	4.1	0.7	73	2.5
4	14	15.2	3.2	28	30.4	3.6	25	27.2	3.3	10	10.9	1.8	15	16.3	3.6	92	3.1
5	34	12.1	7.8	84	29.9	10.9	74	26.3	9.7	64	22.8	11.8	25	8.9	6.0	281	9.6
6	1	9.1	0.2	1	9.1	0.1	5	45.5	0.7	2	18.2	0.4	2	18.2	0.5	11	0.4
7	30	15.0	6.9	73	36.5	9.4	53	26.5	7.0	23	11.5	4.2	21	10.5	5.0	200	6.8
8	20	12.1	4.6	55	33.3	7.1	43	26.1	5.7	31	18.8	5.7	16	9.7	3.8	165	5.6
9	159	16.9	36.5	232	24.7	30.0	227	24.2	29.9	161	17.1	29.6	160	17.0	38.1	939	32.0
10	18	36.7	4.1	16	32.7	2.1	8	16.3	1.1	3	6.1	0.6	4	8.2	1.0	49	1.7
11	19	9.9	4.4	52	27.2	6.7	52	27.2	6.8	39	20.4	7.2	29	15.2	6.9	191	6.5
12	9	27.3	2.1	8	24.2	1.0	6	18.2	0.8	3	9.1	0.6	7	21.2	1.7	33	1.1
13	14	13.6	3.2	23	22.3	3.0	19	18.4	2.5	30	29.1	5.5	17	16.5	4.0	103	3.5
14	12	16.0	2.8	13	17.3	1.7	25	33.3	3.3	15	20.0	2.8	10	13.3	2.4	75	2.6
15	31	16.8	7.1	38	20.5	4.9	54	29.2	7.1	39	21.1	7.2	23	12.4	5.5	185	6.3
Column Total	436			773			760			544			420			2933	
%	14.9			26.4			25.9			18.5			14.3			100.0	

Chi Square = 141.22856 with 56 Degrees of Freedom
Significance = .0000
Missing Observations = 239

Table 17
Relationship of Mother's Schooling and Community College Code

College Code	Less Than High School			Completed High School			Business or Trade School			Completed College			More Than 4 Years			Row	
	N	Row %	Col. %	N	Row %	Col. %	N	Row %	Col. %	N	Row %	Col. %	N	Row %	Col. %	Total	%
1	15	4.9	4.1	132	42.9	10.2	92	29.9	12.3	52	16.9	13.6	17	5.5	7.8	308	10.2
2	26	11.0	7.0	109	46.0	8.4	66	27.8	8.9	18	7.6	4.7	18	7.6	8.3	237	7.9
3	12	15.8	3.2	35	46.1	2.7	16	21.1	2.1	9	11.8	2.3	4	5.3	1.8	76	2.5
4	17	18.5	4.6	41	44.6	3.2	18	19.6	2.4	10	10.9	2.6	6	6.5	2.8	92	3.1
5	28	9.9	7.6	141	49.6	10.9	57	20.1	7.7	44	15.5	11.5	14	4.9	6.4	284	9.4
6	2	14.3	0.6	9	64.3	0.7	3	21.4	0.4	0	0.0	0.0	0	0.0	0.0	14	0.5
7	33	16.0	8.9	104	50.5	8.1	44	21.4	5.9	14	6.8	3.7	11	5.3	5.0	206	6.9
8	17	10.0	4.6	79	46.5	6.1	41	24.1	5.5	24	14.1	6.3	9	5.3	4.1	170	5.7
9	143	14.8	38.6	370	38.3	28.7	234	24.2	31.4	122	12.6	31.9	98	10.1	45.0	967	32.2
10	12	23.1	3.2	24	46.2	1.9	6	11.5	0.8	7	13.5	1.8	3	5.8	1.4	52	1.7
11	18	9.4	4.9	74	38.5	5.7	59	30.7	7.9	31	16.1	8.1	10	5.2	4.6	192	6.4
12	7	18.9	1.9	16	43.2	1.2	10	27.0	1.3	1	2.7	0.3	3	8.1	1.4	37	1.2
13	6	5.6	1.6	48	44.9	3.7	27	25.2	3.6	15	14.0	3.9	11	10.3	5.0	107	3.6
14	9	12.2	2.4	25	33.8	1.9	22	29.7	3.0	14	18.0	3.7	4	5.4	1.8	74	2.5
15	25	13.1	6.8	84	44.0	6.5	50	26.2	6.7	22	11.5	5.7	10	5.2	4.6	191	6.4
Column Total	370			1291			745			383			218			3007	
%	12.3			42.9			24.8			12.7			7.2			100.0	

Chi Square = 119.39479 with 56 Degrees of Freedom
Significance = .0000
Missing Observations = 165

Table 18

Relationship of Father's Occupation and Community College Code

College Code	Manual Work, Service Work, Labor, Housewife			Clerical, Sales Work			Skilled Work, Civil Service Work			Self-employed			Professional			Row	
	N	Row %	Col. %	N	Row %	Col. %	N	Row %	Col. %	N	Row %	Col. %	N	Row %	Col. %	Total	%
1	4	1.3	2.8	14	4.5	5.1	101	32.4	9.7	56	17.9	6.5	137	43.9	18.4	312	10.2
2	7	2.9	5.0	25	10.5	9.2	83	34.7	8.0	76	31.8	8.9	48	20.1	6.4	239	7.8
3	6	8.2	4.3	6	8.2	2.2	27	37.0	2.6	22	30.1	2.6	12	16.4	1.6	73	2.4
4	5	5.5	3.5	9	9.9	3.3	30	33.0	2.9	24	26.4	2.8	23	25.3	3.1	91	3.0
5	11	3.9	7.8	30	10.6	11.0	90	31.8	8.7	90	31.8	10.5	62	21.9	8.3	283	9.3
6	1	7.1	0.7	1	7.1	0.4	4	28.6	0.4	5	35.7	0.6	3	21.4	0.4	14	0.5
7	10	4.8	7.1	26	12.4	9.6	73	34.8	7.0	63	30.0	7.4	38	18.1	5.1	210	6.9
8	1	0.6	0.7	14	8.1	5.1	60	34.7	5.8	58	33.5	6.8	40	23.1	5.4	173	5.7
9	65	6.6	46.1	95	9.6	34.9	361	36.4	34.8	265	26.7	31.0	205	20.7	27.5	991	32.5
10	9	16.7	6.4	3	5.6	1.1	18	33.3	1.7	20	37.0	2.3	4	7.4	0.5	54	1.8
11	5	2.6	3.5	17	8.7	6.3	58	29.7	5.6	64	32.8	7.5	51	26.2	6.8	195	6.4
12	1	2.6	0.7	2	5.3	0.7	20	52.6	1.9	5	13.2	0.6	10	26.3	1.3	38	1.2
13	6	5.5	4.3	12	10.9	4.4	25	22.7	2.4	37	33.6	4.3	30	27.3	4.0	110	3.6
14	1	1.3	0.7	6	7.8	2.2	28	36.4	2.7	19	24.7	2.2	23	29.9	3.1	77	2.5
15	9	4.7	6.4	12	6.3	4.4	59	30.9	5.7	51	26.7	6.0	60	31.4	8.0	191	6.3
Column Total	141			272			1037			855			746			3051	
%	4.6			8.9			34.0			28.0			24.5			100.0	

Chi Square = 173.95247 with 56 Degrees of Freedom
Significance = .0000
Missing Observations = 121

Table 19

Relationship of Mother's Occupation and Community College Code

College Code	Manual Work, Service Work, Labor, Housewife			Clerical Work, Sales Work			Skilled Work, Civil Service Work			Self-employed			Professional			Row	
	N	Row %	Col. %	N	Row %	Col. %	N	Row %	Col. %	N	Row %	Col. %	N	Row %	Col. %	Total	%
1	116	36.8	9.2	103	32.7	10.9	14	4.4	6.1	13	4.1	9.0	69	21.9	14.0	315	10.3
2	103	43.3	8.2	83	34.9	8.8	8	3.4	3.5	14	5.9	9.7	30	12.6	6.1	238	7.8
3	35	46.1	2.8	20	26.3	2.1	6	7.9	2.6	3	3.9	2.1	12	15.8	2.4	76	2.5
4	37	41.6	2.9	29	32.6	3.1	7	7.9	3.0	3	3.4	2.1	13	14.6	2.6	89	2.9
5	105	30.6	8.4	109	38.0	11.5	19	8.6	8.2	6	2.1	4.2	48	16.7	9.7	287	9.3
6	9	64.3	0.7	3	21.4	0.3	1	7.1	0.4	1	7.1	0.7	0	0.0	0.0	14	0.5
7	88	41.7	7.0	57	27.0	6.0	22	10.4	9.5	10	4.7	6.9	34	16.1	6.9	211	6.9
8	72	40.9	5.7	47	26.7	5.0	13	7.4	5.6	7	4.0	4.9	37	21.0	7.5	176	5.7
9	422	42.5	33.6	297	29.9	31.4	93	9.4	40.3	43	4.3	29.9	139	14.0	28.2	994	32.4
10	21	38.2	1.7	16	29.1	1.7	3	5.5	1.3	4	7.3	2.8	11	20.0	2.2	55	1.8
11	76	38.8	6.1	67	34.2	7.1	15	7.7	6.5	11	5.6	7.6	27	13.8	5.5	196	6.4
12	20	52.6	1.6	11	28.9	1.2	2	5.3	0.9	0	0.0	0.0	5	13.2	1.0	38	1.2
13	35	31.8	2.8	25	22.7	2.6	10	9.1	4.3	14	12.7	9.7	26	23.6	5.3	110	3.6
14	37	47.4	2.9	19	24.4	2.0	4	5.1	1.7	5	6.4	3.5	13	16.7	2.6	78	2.5
15	80	41.5	6.4	60	31.1	6.3	14	7.3	6.1	10	5.2	6.9	29	15.0	5.9	193	6.3
Column Total	1256			946			231			144			493			3070	
%	40.9			30.8			7.5			4.7			16.1			100.0	

Chi Square = 89.07722 with 56 Degrees of Freedom
Significance = .0032
Missing Observations = 102

Relationships of Selected Data Elements and Transfer

In order to determine whether the student's sex or race related to transfer, these variables were crosstabulated. The results are presented in Table 20.

This table shows the research group to include 3,172 students. The percentage of community college graduates continuing their education was 57.6%. The majority of community college graduates in the research group were females, 62.5%. Of those who continued their education, the majority, 51.1%, were also female. The percentage of males transferring differed between racial groups by no more than 1.1% and ranged from 65.6% to 66.7% among racial groups. The black male and female students had the highest percentage of transfers. Contrary to the criticisms that female students and minority students are not proportionally represented in the transfer group in relation to their representation, this study found that these groups had the highest percentage of transfers.

Socioeconomic Measures and Transfer

Table 21 shows the relationship of family income and transfer. Tests of statistical significance did not show the relationship to be significant at the .05 level. For all income categories over 50% of the community college graduates continued their education by transferring to a senior university. The difference in percentages of students from any two adjacent income levels was less than 5. The difference in percentages of students from the highest and the lowest income levels who transferred was less than 9. Over 10% of the graduates reported family incomes of less than 6,000. Over 27% of the graduates reported incomes of less than 9,000.

Table 20
Relation of Race and Sex to Transfer

		White		Black		Other Minority		Row	
		Males	Female	Males	Females	Males	Females .	Total	
Non Transfer	N	321	726	23	66	58	137	N	1,331
	Row %	24.1	54.5	1.7	5.0	4.4	10.3	%	42.3
	Col %	34.4	49.0	33.3	38.8	33.3	44.3		
Transfer	N	613	754	46	104	116	172	N	1,805
	Row %	34.0	41.8	2.5	5.8	6.4	9.5	%	57.6
	Col %	65.6	51.0	66.7	61.2	66.7	55.7		
Column Total	N	934	1,480	69	170	174	309	N	3,136
% of Total		29.8	47.2	2.2	5.4	5.5	9.9	%	100.00

Missing Observations = 36

Table 21
Relationship of Family Income and Transfer

Income Category		0-5999	6000-8999	9000-11,999	12,000-14,999	15,000 and over	Row Total
Non Transfer	N	139	201	293	249	296	N 1,178
	Row %	11.8	17.1	24.9	21.1	25.1	100%
	Col %	46.5	43.5	44.5	43.1	38.5	426%
Transfer	N	160	261	366	329	473	N 1,589
	Row %	10.1	16.4	23.0	20.7	29.8	100%
	Col %	53.3	56.5	55.5	56.9	61.5	57.4%
Total	N	299	462	659	578	769	2,767
% of Total		10.8	16.7	23.8	20.9	27.8	100%

Chi Square 8.30092 with 4 degrees of Freedom Significance = .08

Missing Observations = 405

These results do not support two of the major criticisms relative to the role of community colleges in extending the democratization of higher education. Specifically, the information does not support the criticisms that low SES students are not adequately represented among community college graduates and that low SES community college graduates do not continue their education in proportion to the numbers that graduate. The percentage of students in each of the income levels approximates the percentages found in the 1973 summary data for all students taking the Twelfth Grade Test for that year. The information would support the conclusion that the community colleges are serving a group of students that is representative of the entire population in relation to the variable of family income.

Tables 22 and 23 show the relationship between parental schooling and transfer. In relation to the variable of father's schooling, the results indicate that nontransfer students do differ significantly from transfer students at the .01 level. Mother's schooling did not differ significantly among nontransfer and transfer students.

The tables show that for each of the parental educational levels over 50% of the graduated community college students transferred. In relation to father's schooling and mother's schooling, the highest percentage of transfer was found within the "completed college category." For the variable of father's schooling, 65.3% transferred and for the variable of mother's schooling, 61.9% transferred.

The results clearly indicated that these community colleges were serving students whose parents had less than a college degree. These students were proportionally represented among the graduate

Table 22
Relationship of Father's Schooling and Transfer

		Less than High School	Completed High School	Business or Trade School	Completed College	More Than 4 yrs.	Row Total
Non Transfer		195	336	340	189	171	1,231
	Row %	15.8	27.3	27.6	15.4	13.9	100%
	Col %	44.7	43.5	44.7	34.7	40.7	42.0
Transfer		241	437	420	355	249	1,702
	Row %	14.2	25.7	24.7	20.9	14.6	100%
	Col %	55.3	56.5	55.3	65.3	59.3	58.0%
Column Total		436	773	760	544	420	2,933
% of Total		14.9	26.4	25.9	18.5	14.3	

Chi Square = 16.39769 with 4 degrees of Freedom Significance = 1.00

Number of Missing Observations = 239

Table 23

Relationship of Mother's Schooling and Transfer

		Less than High School	Completed High School	Business or Trade School	Completed College	More Than 4 yrs.	Row Total
Non Transfer		168	561	300	146	84	1,259
	Row %	13.3	44.6	23.8	11.6	6.7	100%
	Col %	45.4	43.5	40.3	38.1	38.5	41.9%
Transfer		202	730	445	237	134	1,748
	Row %	11.6	41.8	25.5	13.6	7.7	100%
	Col %	54.6	56.5	59.7	61.9	61.5	58.1%
Column Total		370	1,291	745	383	218	3,007
% of Total		12.3	42.9	24.8	12.7	7.2	

Chi Square = 7.22796 with 4 degrees of Freedom Significance = 0.1243

Number of Missing Observations = 165

population and transferred in proportion to their representation within the graduate population. Using parental educational level as an indicator of socioeconomic status, these data support the conclusion that community colleges included in the research study were serving low SES students.

Table 24 shows the relationship of father's occupation and transfer.

It can be observed that the percentage of students who transferred differed only moderately across father's occupation categories. The difference between the lowest and the highest percentage was 13.3. Although this difference was statistically significant at the .05 level, over 53% of the students in any occupational category transferred. Further, the representation of all community college graduated students in the various occupational categories closely paralleled, their representation in the state as reported by the Florida Twelfth Grade Testing Program summary data of 1973.

It should also be noted that the largest percentage of transfer students in any occupational group was found in the second lowest on the socioeconomic continuum.

A casual observation of the percentage of graduated students from each of the occupational categories might lead one to accept the criticism that low SES students would not be adequately represented in the transfer population. On the contrary, the percentage of graduated students in each occupational category is very close to the percentage in each category who took the Florida Twelfth Grade Test in 1973. It is not appropriate to expect equal percentages in the

Table 24

Relationship of Father's Occupation and Transfer

		Manual work, service work, labor, housewife	Clerical sales work	Skilled work, civil service work	Self-employed	Professional	Row Total
Non Transfer		66	91	466	360	307	1,290
	Row %	5.1	7.1	36.1	27.9	23.8	100%
	Col %	46.8	33.5	44.9	42.1	41.2	42.3%
Transfer		75	181	571	495	439	1,761
	Row %	4.3	10.3	32.4	28.1	24.9	100%
	Col %	53.2	66.5	55.1	57.9	58.8	57.7%
Column Total		141	272	1,037	855	746	3,051
% of Total		4.6	8.9	34.0	28.0	24.5	

Chi Square = 13.26304 with 4 degrees of Freedom Significance = 0.0101

Number of Missing Observations = 121

occupational groups when the percentages are not equal in the state's population.

Table 25 shows the results of crosstabulating the variable of mother's occupation and transfer. The nontransfer group was found to significantly differ from the transfer group by occupational category at the .05 level. A probable reason for this is the large percentage of students classified in the first category. This can be explained by the inclusion of the occupation of housewife in that category.

The lowest percentage of transfer students (49.3%) identified their mother's occupation as self-employed. The highest percentage of transfer students (61.5%) identified their mother's occupation as professional.

From the position of practical significance, it can be observed that the percentage of transfer students for each category of mothers' occupation differs by less than 9% from the percentage of transfer students as a whole. The difference between percentages for each of the five categories can also be observed to be small. Based on these data, it would be reasonable to conclude that, though the nontransfer group and the transfer group are significantly different statistically in relation to this variable the difference has little practical value.

Students' Educational Objectives and Transfer

Tables 26 and 27 provide information which is related to the criticism that community colleges extend the tracking system found in some high schools and the system of meritocracy.

Table 26 shows that less than 16% of these community college graduates had plans other than to attend a four-year or two-year

Table 25
Relationship of Mother's Occupation and Transfer

		Manual work, service work, labor, housewife	Clerical sales work	Skilled work, civil service work	Self-employed	Professional	Row Total
Non Transfer		548	386	106	73	190	1,303
	Row %	42.1	29.6	8.1	5.6	14.6	100%
	Col %	43.6	40.8	45.9	50.7	38.5	42.4
Transfer		708	560	125	71	303	1,767
	Row %	40.1	31.7	7.1	4.0	17.1	100%
	Col %	56.4	59.2	54.1	49.3	61.5	57.6%
Column Total		1,256	946	231	144	493	3,070
% of Total		40.9	30.8	7.5	4.7	16.1	

Chi Square = 9.97648 with 4 Degrees of Freedom Significance = 0.0408

Number of Missing Observations = 102

college at the time they took the Twelfth Grade Test or were undecided at this time.

The largest percentage (56.2) indicated they planned to continue their education at a four-year college. The second largest group (29.7%) indicated they planned to continue at a community college. For each category, over 50% of the graduates actually continued their education. The difference between the transfer rate of these two categories (14.3%) may be attributed to the original difference in objectives at the time of the Twelfth Grade Test. Students whose original educational plans did not include attending a four- or two-year college had the lowest percentage of transfer. Over 30% of the students in any one category continued their education regardless of their educational plans at the time of the Florida Twelfth Grade Test.

One of the criticisms found in the literature was the fact that community colleges functioned to "cool out" students or reduce their original educational goals. Zwerling commented that community colleges should be functioning to heat students up, raise their educational objectives. The data support the conclusion that "heating up" has occurred in both the graduated student and transferred student groups. It also showed that low SES students were not cooled. These students were proportionally represented in the graduated group and in the transferred group.

Table 27 shows the relationship of Florida Twelfth Grade Test score and transfer status. The difference in transfer rate was found to differ significantly among test score categories at the .05 level.

Admissions to a Florida university directly from high school generally required a test score of 300 or higher. Of those who continued their education, 39.5% would not have been eligible for admission

Table 26
Relationship of Student's Plan to Continue and Transfer

		Not Decided	Do Not Want to Continue	Armed Forces	On The Job Training	Business School	4 Year College	2 Year College	Vocational Trade School	Nursing	Row Total %
Non Transfer											
	N	73	2	13	6	28	611	456	29	54	1316
	Row %	5.5	0.2	1.0	0.5	2.1	46.4	34.7	2.2	4.1	42.3
	Col %	58.4	66.7	65.0	60.0	60.9	34.9	49.3	50.0	68.4	
Transfer											
	N	52	1	7	4	18	1138	469	29	25	1795
	Row %	2.9	0.1	0.4	0.2	1.0	63.4	26.1	1.6	1.4	57.7
	Col %	41.6	33.3	35.0	40.0	39.1	65.1	50.7	50.0	31.6	
Column Total		125	3	20	10	46	1749	925	58	96	3111
	%	4.0	0.1	0.6	0.3	1.5	56.2	29.7	1.9	3.1	100.0

Chi Square = 107.31564 with 9 Degrees of Freedom
Significance = 0.000
Missing Observations = 61

to a Florida university at the time they graduated from high school. For these students, the community college provided the opportunity to continue their education which would not have been available otherwise. Thus, these data do not support the statements made by Karabel, Bowles, and Gintis that community colleges are perpetuating the system of meritocracy.

Table 28 shows the results of crosstabulating the variable of the highest level of education the student planned to complete and transfer.

The nontransfer and transfer groups were significantly different when compared on this variable.

The majority of students (66.9%) had completion of a community college degree or higher as an educational objective. Ten percent of the students who transferred did not have educational plans which included attending a senior university. Of these whose plans included completing only an Associate in Science or an Associate of Arts degree, 540 or 18.8% continued their education by transferring.

These data (as these of Table 26) do not support the criticism made by Clark and others that the community college functions to "cool out" students. It shows that students' original objectives remained consistent or were raised.

Table 29 shows the relationship between the students' planned occupational level and transfer.

Tests of statistical significance show differences at the .01 level.

The majority (62.4%) of all the students reported plans to perform "professional work." Almost 60% of the students in this

Table 27

Relationship of 12th Grade Test Score and Transfer

		0- 99	100- 199	200- 299	300- 399	400 thru Highest	Row Total
Non Transfer		71	153	327	489	303	1,343
	Row %	5.3	11.4	24.3	36.4	22.6	42.3
	Col %	54.6	42.9	41.6	43.5	39.1	
Transfer		59	204	459	635	472	1,829
	Row %	3.2	11.2	25.1	34.7	25.8	57.5
	Col %	45.4	57.1	58.4	56.5	60.9	
Column Total		130	347	786	1,124	775	3,172
% of Total		4.1	11.3	24.8	35.4	24.4	of 100

Chi Square = 12.20235 with 4 degrees of Freedom Significance = 0.0159

Table 28

Relationship of Highest Level of Education Planned to Complete and Transfer

	No Specific Plans	1 Year Program	1½ Year Program	2 Year Program A.S.	2 Year Program A.A.	4 Year Program	Masters	Ph.D.	Other	Row Total %
Non Transfer										
N	121	7	6	266	71	423	116	143	43	1196
Row %	10.1	0.6	0.5	22.2	5.9	35.4	9.7	12.0	3.6	41.4
Col %	43.5	70.0	66.7	65.8	50.7	36.6	29.4	34.6	50.6	
Transfer										
N	157	3	3	138	69	734	279	270	42	1695
Row %	9.3	0.2	0.2	8.1	4.1	43.3	16.5	15.9	2.5	58.6
Col %	56.5	30.0	33.3	34.2	49.3	63.4	70.6	65.4	49.4	
Column Total	278	10	9	404	140	1157	395	413	85	2891
%	9.6	0.3	0.3	14.0	4.8	40.0	13.7	14.3	2.9	100.0

Chi Square = 156.29619 with 8 Degrees of Freedom
Significance = 0.000
Missing Observations = 281

category transferred. Of these students in the first three categories, 488 continued their education. This was 27.8% of the total that continued their education after graduating from one of the community colleges.

Data presented in this table do not support the criticism that community colleges are cooling out students.

University and Curricula Selection

Table 30 shows the relationship of planned major emphasis of study at the time of the Florida Twelfth Grade Test and the university program of subsequent enrollment. An examination of these data indicate the percentages of students who retained their planned major emphasis of study were usually low. The highest instance of retained major was education (71.0%) with business being second highest (64.9%). Further it can be noted that the frequency of selection of many majors was very small at the time of the Florida Twelfth Grade Test as well as the time of subsequent enrollment in the university.

Further examination of these data is presented in Table 31. This table indicates 58% of the students indicated five areas of major emphasis at the time of the Twelfth Grade Test. Subsequently these majors were chosen by 63% of the transferred students. This would indicate that the popularity of these five majors was not diminished or enhanced appreciably during the period of community college attendance.

The criticism that community colleges are channeling students into programs that provide little social mobility would appear not to be supported by these data.

An additional criticism was that the community colleges failed to counsel students into majors that provided social mobility. This criticism could be supported by the results presented in Table 30.

Table 29

Relationship of Student's Planned Occupational Level and Transfer

	Manual Work, Service Work, Labor, Housewife	Clerical, Sales Work	Skilled Work, Civil Service Work	Self-employed	Professional	Row Total %
Non Transfer						
N	43	311	99	75	772	1300
Row %	3.3	23.9	7.6	5.8	59.4	42.6
Col %	47.8	48.4	47.6	35.9	40.5	
Transfer						
N	47	332	109	134	1133	1755
Row %	2.7	18.9	6.2	7.6	64.6	57.4
Col %	52.2	51.6	52.4	64.1	59.5	
Column Total	90	643	208	209	1905	3055
%	2.9	21.0	6.8	6.8	62.4	100.0

Chi Square = 19.06680 with 4 Degrees of Freedom
Significance = 0.0008
Missing Observations - 117

Table 30

Relationship of Planned Major Emphasis of Study and University Program

		Agri-culture	Archi-tecture	Area Studies	Biology	Business	Communi-cations	Computer Science	Education	Engineer-ing	Fine Arts	Row Total %
Agriculture	N	5	2	0	2	6	1	0	5	0	2	28
	Row %	17.9	7.1	0.0	7.1	21.4	3.6	0.0	17.9	0.0	7.1	1.7
	Col %	20.0	8.7	0.0	3.4	1.6	1.4	0.0	1.3	0.0	3.8	
Biological Sciences	N	7	0	0	26	14	2	1	19	6	2	130
	Row %	5.4	0.0	0.0	20.0	10.8	1.5	0.8	14.6	4.6	1.5	8.0
	Col %	28.0	0.0	0.0	44.0	3.8	2.8	6.7	4.9	8.1	3.8	
Black Studies	N	0	0	0	0	0	0	0	0	0	0	1
	Row %	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1
	Col %	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Business	N	3	2	1	3	168	8	2	29	4	3	259
	Row %	1.2	0.8	0.4	1.2	64.9	3.1	0.8	11.2	1.5	1.2	15.9
	Col %	12.0	8.7	100.0	5.1	45.0	11.1	13.3	7.4	5.4	5.8	
Education	N	0	2	0	4	18	4	2	130	0	3	183
	Row %	0.0	1.1	0.0	2.2	9.8	2.2	1.1	71.0	0.0	1.6	11.2
	Col %	0.0	8.7	0.0	6.8	4.8	5.6	13.3	33.2	0.0	5.8	
Engineering	N	0	6	0	2	14	1	3	2	30	1	67
	Row %	0.0	9.0	0.0	3.0	20.9	1.5	4.5	3.0	44.8	1.5	4.1
	Col %	0.0	26.1	0.0	3.4	3.8	1.4	20.0	0.5	40.5	1.9	

Table 30 (continued)

		Agri-culture	Archi-tecture	Area Studies	Biology	Business	Communi-cations	Computer Science	Education	Engineer-ing	Fine Arts	Row Total &
Home Economics	N	0	0	0	0	0	2	0	9	0	0	22
	Row %	0.0	0.0	0.0	0.0	0.0	9.1	0.0	40.9	0.0	0.0	1.3
	Col %	0.0	0.0	0.0	0.0	0.0	2.8	0.0	2.3	0.0	0.0	
Humanities	N	1	3	0	0	9	19	2	49	5	25	164
	Row %	0.6	1.8	0.0	0.0	5.5	11.6	1.2	29.9	3.0	15.2	10.0
	Col %	4.0	13.0	0.0	0.0	2.4	26.4	13.3	12.5	6.8	48.1	
Mathematics	N	0	0	0	1	16	0	3	12	3	1	44
	Row %	0.0	0.0	0.0	2.3	36.4	0.0	6.8	27.3	6.8	2.3	2.7
	Col %	0.0	0.0	0.0	1.7	4.3	0.0	20.0	3.1	4.1	1.9	
Nursing	N	1	1	0	2	4	0	0	16	0	2	52
	Row %	1.9	1.9	0.0	3.8	7.7	0.0	0.0	30.8	0.0	3.8	3.2
	Col %	4.0	4.3	0.0	3.4	1.1	0.0	0.0	4.1	0.0	3.8	
Physical Science	N	1	0	0	5	12	2	0	5	7	1	58
	Row %	1.7	0.0	0.0	8.6	20.7	3.4	0.0	8.6	12.1	1.7	3.5
	Col %	4.0	0.0	0.0	8.5	3.2	2.8	0.0	1.3	9.5	1.9	
Social Science	N	0	0	0	2	41	6	0	27	1	2	210
	Row %	0.0	0.0	0.0	1.0	19.5	2.9	0.0	12.9	0.5	1.0	12.9
	Col %	0.0	0.0	0.0	3.4	11.0	8.3	0.0	6.9	1.4	3.8	

Table 30 (continued)

		Agri-culture	Archi-tecture	Area Studies	Biology	Business	Communi-cations	Computer Science	Education	Engineer-ing	Fine Arts	Row Total %
Technical Education	N	1	1	0	5	13	4	2	15	4	0	81
	Row %	1.2	1.2	0.0	6.2	16.0	4.9	2.5	18.5	4.9	0.0	5.0
	Col %	4.0	4.3	0.0	8.5	3.5	5.6	13.3	3.8	5.4	0.0	
Trade and Industrial Education	N	0	0	0	0	4	4	0	6	3	3	31
	Row %	0.0	0.0	0.0	0.0	12.9	12.9	0.0	19.4	9.7	9.7	1.9
	Col %	0.0	0.0	0.0	0.0	1.1	5.6	0.0	1.5	4.1	5.8	
Something Not Listed	N	3	5	0	1	22	16	0	34	5	6	159
	Row %	1.9	3.1	0.0	0.6	13.8	10.1	0.0	21.4	3.1	3.8	9.7
	Col %	12.0	21.7	0.0	1.7	5.9	22.2	0.0	8.7	6.8	11.5	
Undecided	N	3	1	0	6	32	3	0	33	6	1	145
	Row %	2.1	0.7	0.0	4.1	22.1	2.1	0.0	22.8	4.1	0.7	8.9
	Col %	12.0	4.3	0.0	10.2	8.6	4.2	0.0	8.4	8.1	1.9	
Column	Total	25	23	1	59	373	72	15	391	74	52	1634
	%	1.5	1.4	0.1	3.6	22.8	4.4	0.9	23.9	4.5	3.2	100.0

Table 30 (continued)

		Foreign Language	Health	Home Economics	Letters	Library Science	Mathematics	Physical Science	Psychology	Public Affairs	Social Science	Interdisciplinary	Row Total %
Agriculture	N	0	1	0	0	0	0	0	0	2	1	1	
	Row %	0.0	3.6	0.0	0.0	0.0	0.0	0.0	0.0	7.1	3.6	3.6	28
	Col %	0.0	1.3	0.0	0.0	0.0	0.0	0.0	0.0	1.6	0.7	6.7	1.7
Biological Sciences	N	1	13	0	2	0	1	11	7	4	13	1	
	Row %	0.8	10.0	0.0	1.5	0.0	0.8	8.5	5.4	3.1	10.0	0.8	130
	Col %	10.0	17.3	0.0	5.9	0.0	7.1	28.9	10.3	3.3	8.6	6.7	8.0
Black Studies	N	0	0	0	0	0	0	0	1	0	0	0	
	Row %	0.0	0.0	0.0	0.0	0.0	0.0	0.0	100.0	0.0	0.0	0.0	1
	Col %	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.5	0.0	0.0	0.0	0.1
Business	N	0	4	0	2	0	1	1	4	12	12	0	
	Row %	0.0	1.5	0.0	0.8	0.0	0.4	0.4	1.5	4.6	4.6	0.0	259
	Col %	0.0	5.3	0.0	5.9	0.0	7.1	2.6	5.9	9.8	7.9	0.0	15.9
Education	N	0	4	0	3	0	0	1	1	4	7	0	
	Row %	0.0	2.2	0.0	1.6	0.0	0.0	0.5	0.5	2.2	3.8	0.0	183
	Col %	0.0	5.3	0.0	8.8	0.0	0.0	2.6	1.5	3.3	4.6	0.0	11.2
Engineering	N	0	0	0	0	0	0	1	0	3	3	1	
	Row %	0.0	0.0	0.0	0.0	0.0	0.0	1.5	0.0	4.5	4.5	1.5	67
	Col %	0.0	0.0	0.0	0.0	0.0	0.0	2.6	0.0	2.5	2.0	6.7	4.1

Table 30 (continued)

		Foreign Language	Health	Home Economics	Letters	Library Science	Mathe-matics	Physical Science	Psy-chology	Public Affairs	Social Science	Interdis-ciplinary	Row Total %
Home Economics	N	0	1	5	0	0	0	0	1	2	2	0	22
	Row %	0.0	4.5	22.7	0.0	0.0	0.0	0.0	4.5	9.1	9.1	0.0	1.3
	Col %	0.0	1.3	23.8	0.0	0.0	0.0	0.0	1.5	1.6	1.3	0.0	
Humanities	N	6	2	5	10	0	0	3	2	5	18	0	164
	Row %	3.7	1.2	3.0	6.1	0.0	0.0	1.8	1.2	3.0	11.0	0.0	10.0
	Col %	60.0	2.7	23.8	29.4	0.0	0.0	7.9	2.9	4.1	11.9	0.0	
Mathematics	N	0	1	0	0	0	4	0	0	1	2	0	44
	Row %	0.0	2.3	0.0	0.0	0.0	9.1	0.0	0.0	2.3	4.5	0.0	2.7
	Col %	0.0	1.3	0.0	0.0	0.0	28.6	0.0	0.0	0.8	1.3	0.0	
Nursing	N	0	0	1	0	0	0	0	5	7	4	0	52
	Row %	0.0	17.3	1.9	0.0	0.0	0.0	0.0	9.6	13.5	7.7	0.0	3.2
	Col %	0.0	12.0	4.8	0.0	0.0	0.0	0.0	7.4	5.7	2.6	0.0	
Physical Science	N	0	9	0	1	0	0	9	3	0	3	0	58
	Row %	0.0	15.5	0.0	1.7	0.0	0.0	15.5	5.2	0.0	5.2	0.0	3.5
	Col %	0.0	12.0	0.0	2.9	0.0	0.0	23.7	4.4	0.0	2.0	0.0	
Social Science	N	1	4	3	9	0	1	3	19	37	49	5	210
	Row %	0.5	1.9	1.4	4.3	0.0	0.5	1.4	9.0	17.6	23.3	2.4	12.9
	Col %	10.0	5.3	14.3	26.5	0.0	7.1	7.9	27.9	30.3	32.5	33.3	

Table 30 (continued)

		Foreign Language	Health	Home Economics	Letters	Library Science	Mathematics	Physical Science	Psychology	Public Affairs	Social Science	Interdisciplinary	Row Total %
Technical Education	N	1	14	1	0	0	1	2	2	7	7	1	81
	Row %	1.2	17.3	1.2	0.0	0.0	1.2	2.5	2.5	8.6	8.6	1.2	5.0
	Col %	10.0	18.7	4.8	0.0	0.0	7.1	5.3	2.9	5.7	4.6	6.7	
Trade and Industrial Education	N	0	0	0	0	0	0	0	1	2	6	2	31
	Row %	0.0	0.0	0.0	0.0	0.0	0.0	0.0	3.2	6.5	19.4	6.5	1.9
	Col %	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.5	1.6	4.0	13.3	
Something Not Listed	N	1	7	0	6	0	0	5	11	24	11	2	159
	Row %	0.6	4.4	0.0	3.8	0.0	0.0	3.1	6.9	15.1	6.9	1.3	9.7
	Col %	10.0	9.3	0.0	17.6	0.0	0.0	13.2	16.2	19.7	7.3	13.3	
Undecided	N	0	6	6	1	1	6	2	11	12	13	2	145
	Row %	0.0	4.1	4.1	0.7	0.7	4.1	1.4	7.6	8.3	9.0	1.4	8.9
	Col %	0.0	8.0	28.6	2.9	100.0	42.9	5.3	16.2	9.8	3.6	13.3	
Column Total		10	75	21	34	1	14	38	68	122	151	15	1634
	%	0.6	4.6	1.3	2.1	0.1	0.9	2.3	4.2	7.5	9.2	0.9	100.0

Chi Square = 1834.59326 with 300 Degrees of Freedom
Significance = 0.000

Table 31

Selected Major Emphasis of Study and
Selected University Program

Emphasis of Study	N	%	University Program	N	%	% Change
Business	259	15.9	Business	373	22.8	+ 6.9
Social Science	210	12.9	Social Science	151	9.2	- 3.7
Education	183	11.2	Education	391	23.9	+12.7
Humanities	164	10.0	Humanities	52	3.2	- 6.8
Biological Science	130	8.0	Biological Science	59	3.6	- 4.4
Total	946	58.0		1026	62.7	--

University selection

Another criticism found in the literature was graduated community college students are limited in their ability to participate in various university programs because of their inability to transfer to universities outside of their geographic area. The distance of 50 miles or less was selected as the inside geographic area and greater than 50 miles as the outside geographic area. These groups were crosstabulated with family income and the results are presented in Table 32.

Using the Chi Square Test, the two groups were significantly different at the .05 level.

Students who reported family income in excess of 15,000 dollars most frequently (61.3%) transferred to a university over 50 miles from the community college they attended. Students reporting family income of less than 6,000 dollars transferred to a university over 50 miles from the community college they attended with a frequency of 44.1%.

Table 32

Relationship of Distance to Transfer University and Family Income

Income Level		Distance Greater Than 50 Miles	Distance Greater Than 50 Miles	Row Total %
0 to 5,999	N	77	83	160
	Row %	48.1	51.9	10.1
	Col %	8.7	11.7	
6,000 to 8,999	N	132	129	261
	Row %	50.6	49.4	16.4
	Col %	15.0	18.2	
9,000 to 11,999	N	201	165	366
	Row %	54.9	45.1	23.0
	Col %	22.8	23.3	
12,000 to 14,999	N	182	147	329
	Row %	55.3	44.7	20.7
	Col %	20.6	20.8	
15,000 and Over	N	290	183	473
	Row %	61.3	38.7	29.8
	Col %	32.9	25.9	
	Column Total	882	707	1589
	%	55.5	44.5	100.0

Chi Square = 12.60876 with 4 Degrees of Freedom
Significance - 0.0134
Missing Observations - 240

The data supplied in Table 32 support the criticism that low SES students are limited in their ability to transfer. It is important to point out, however, that for the family income level of less than 6,000 dollars almost 50% of the students were able to transfer to an outside university. The data do not warrant the conclusion that, for those who transferred within 50 miles, their curricula choices were limited.

Tables 33 through 37 relate the measures of socioeconomic status used previously and the students' university programs.

Selection of university curricula

Using the previously established measures of socioeconomic status, only one of the Tables 34 showed a socioeconomic measure, Father's Schooling, to be significantly related to university program choice. However, observing the row differences in frequency of representation of the various SES groups under each major, it can be seen that the variance is very small. Thus the statistical significance relates to the large number of cases and not to major differences in frequencies. These minor differences do not warrant the criticism that socioeconomic status limits students' choice of curricula.

Outside Employment

Tables 38, 39, and 40 were developed in order to determine the relationship of outside employment and transfer.

Table 38 shows the relationship of students' plan (at the time of the Florida Twelfth Grade Test) to work while continuing their education. The data showed that only 20.2% of the students who transferred had no plans to work while continuing their education. Of students in the nontransfer group, 51.9% indicated they planned to

Table 33

Relationship of Family Income and University Program

		Agri-culture	Archi-tecture	Area Studies	Biology	Business	Communi-cations	Computer Science	Education	Engineer-ing	Fine Arts	Foreign Language	Row Total %
0 to 5999	N	4	0	0	4	30	8	1	38	7	4	3	156
	Row %	2.6	0.0	0.0	2.6	19.2	5.1	0.6	24.4	4.5	2.6	1.9	10.0
	Col %	15.4	0.0	0.0	7.4	8.2	11.1	7.7	10.6	9.9	7.5	30.0	
6000 to 8999	N	3	5	0	6	59	6	2	76	10	10	1	255
	Row %	1.2	2.0	0.0	2.4	23.1	2.4	0.8	29.8	3.9	3.9	0.4	16.4
	Col %	11.5	25.0	0.0	11.1	16.2	8.3	15.4	21.2	14.1	18.9	10.0	
9000 to 11,999	N	3	4	0	18	85	14	5	84	16	10	2	360
	Row %	0.8	1.1	0.0	5.0	23.6	3.9	1.4	23.3	4.4	2.8	0.6	23.1
	Col %	11.5	20.0	0.0	33.3	23.4	19.4	38.5	23.4	22.5	18.9	20.0	
12,000 to 14,999	N	7	3	1	9	69	19	2	67	19	13	0	322
	Row %	2.2	0.9	0.3	2.8	21.4	5.9	0.6	20.8	5.9	4.0	0.0	20.7
	Col %	26.9	15.0	100.0	16.7	19.0	26.4	15.4	18.7	26.8	24.5	0.0	
15,000 and over	N	9	8	0	17	121	25	3	94	19	16	4	466
	Row %	1.9	1.7	0.0	3.6	26.0	5.4	0.6	20.2	4.1	3.4	0.9	29.9
	Col %	34.6	40.0	0.0	31.5	33.2	34.7	23.1	26.2	26.8	30.2	40.0	
Column	Total	26	20	1	54	364	72	13	359	71	53	10	1559
	%	1.7	1.3	0.1	0.1	23.3	4.6	0.8	23.0	4.6	3.4	0.6	100.0

Table 33 (continued)

		Health	Home Economics	Law	Letters	Library Science	Mathematics	Physical Science	Psychology	Public Affairs	Social Science	Interdisciplinary	Row Total %
0-5999	N	5	3	0	2	0	0	3	9	17	17	1	156
	Row %	3.2	1.9	0.0	1.3	0.0	0.0	1.9	5.8	10.9	10.9	0.6	10.0
	Col %	6.8	15.0	0.0	6.9	0.0	0.0	7.9	13.8	14.5	11.9	6.3	
6000-8999	N	13	0	0	3	0	3	3	12	20	21	2	255
	Row %	5.1	0.0	0.0	1.2	0.0	1.2	1.2	4.7	7.8	8.2	0.8	16.4
	Col %	17.8	0.0	0.0	10.3	0.0	23.1	7.9	18.5	17.1	14.7	12.5	
9000 to 11,999	N	19	6	0	4	1	5	12	10	26	33	3	360
	Row %	5.3	1.7	0.0	1.1	0.3	1.4	3.3	2.8	7.2	9.2	0.8	23.1
	Col %	26.0	30.0	0.0	13.8	100.0	38.5	31.6	15.4	22.2	23.1	18.8	
12,000 to 14,999	N	18	6	0	11	0	3	7	13	26	27	3	322
	Row %	5.6	1.6	0.0	3.4	0.0	0.9	2.2	4.0	8.1	8.4	0.9	20.7
	Col %	24.7	25.0	0.0	37.9	0.0	23.1	18.4	20.0	22.2	18.9	18.8	
15,000 and over	N	18	6	1	9	0	2	13	21	28	45	7	466
	Row %	3.9	1.3	0.2	1.9	0.0	0.4	2.8	4.5	6.0	9.7	1.5	29.9
	Col %	24.7	30.0	100.0	31.0	0.0	15.4	34.2	32.3	23.9	31.5	43.8	
Column Total		73	20	1	29	1	13	38	65	117	143	16	1559
	%	4.7	1.3	0.1	1.9	0.1	0.8	2.4	4.2	7.5	9.2	1.0	100.0

Chi Square = 77.96512 with 84 Degrees of Freedom
Significance = 0.6687

Table 34

Relationship of Father's Schooling and University Program

		Agri-culture	Archi-tecture	Area Studies	Biology	Business	Communi-cations	Computer Science	Education	Engineering	Fine Arts	Row Total %
Less than High School	N	2	1	0	5	65	7	4	64	14	4	236
	Row %	0.8	0.4	0.0	2.1	27.5	3.0	1.7	27.1	5.9	1.7	14.1
	Col %	7.4	4.3	0.0	8.1	16.8	9.2	26.7	16.1	20.0	7.0	
Completed High School	N	4	1	1	16	91	19	4	117	18	11	429
	Row %	0.9	0.2	0.2	3.7	21.2	4.4	0.9	27.3	4.2	2.6	25.6
	Col %	14.8	4.3	100.0	25.8	23.6	25.0	26.7	29.4	25.7	19.3	
Business or Trade School	N	5	9	0	23	82	20	4	97	21	17	414
	Row %	1.2	2.2	0.0	5.6	19.8	4.8	1.0	23.4	5.1	4.1	24.7
	Col %	18.5	39.1	0.0	37.1	21.2	26.3	26.7	24.4	30.0	29.8	
Completed College	N	11	7	0	10	106	15	1	71	8	11	352
	Row %	3.1	2.0	0.0	2.8	30.1	4.3	0.3	20.2	2.3	3.1	21.0
	Col %	40.7	30.4	0.0	16.1	27.5	19.7	6.7	17.8	11.4	19.3	
More than 4 Years	N	5	5	0	8	42	15	2	49	9	14	243
	Row %	2.1	2.1	0.0	3.3	17.3	6.2	0.8	20.2	3.7	5.8	14.5
	Col %	18.5	21.7	0.0	12.9	10.9	19.7	13.3	12.3	12.9	24.6	
Column Total		27	23	1	62	386	76	15	398	70	57	1674
	%	1.6	1.4	0.1	3.7	23.1	4.5	0.9	23.8	4.2	3.4	100.0

Table 34 (continued)

		Foreign Language	Health	Home Economics	Law	Letters	Mathematics	Physical Science	Psychology	Public Affairs	Social Science	Interdisciplinary	Row Total %
Less than High School	N	2	7	2	1	2	2	3	6	24	20	1	236
	Row %	0.8	3.0	0.8	0.4	0.8	0.8	1.3	2.5	10.2	8.5	0.4	14.1
	Col %	20.0	9.3	8.0	100.0	6.3	14.3	7.5	9.0	18.8	13.2	6.3	
Completed High School	N	1	19	6	0	7	3	10	16	36	45	4	429
	Row %	0.2	4.4	1.4	0.0	1.6	0.7	2.3	3.7	8.4	10.5	0.9	25.6
	Col %	10.0	25.3	24.0	0.0	21.9	21.4	25.0	23.9	28.1	29.8	25.0	
Business or Trade School	N	5	20	7	0	8	2	12	22	27	31	2	414
	Row %	1.2	4.8	1.7	0.0	1.9	0.5	2.9	5.3	6.5	7.5	0.5	24.7
	Col %	50.0	26.7	28.0	0.0	25.0	14.3	30.0	32.8	21.1	20.5	12.5	
Completed College	N	2	16	6	0	8	6	7	12	25	24	6	352
	Row %	0.6	4.5	1.7	0.0	2.3	1.7	2.0	3.4	7.1	6.8	1.7	21.0
	Col %	20.0	21.3	24.0	0.0	25.0	42.9	17.5	17.9	19.5	15.9	37.5	
More than 4 Years	N	0	13	4	0	7	1	8	11	16	31	3	243
	Row %	0.0	5.3	1.6	0.0	2.9	0.4	3.3	4.5	6.6	12.8	1.2	14.5
	Col %	0.0	17.3	16.0	0.0	21.9	7.1	20.0	16.4	12.5	20.5	18.8	
Column Total		10	75	25	1	32	14	40	67	128	151	16	1674
	%	0.6	4.5	1.5	0.1	1.9	0.8	2.4	4.0	7.6	9.0	1.0	100.0

Chi Square = 110.91919 with 80 Degrees of Freedom
Significance = .0111

Table 35

Relationship of Mother's Schooling and University Program

		Agri-culture	Archi-tecture	Area Studies	Biology	Business	Communi-cations	Computer Science	Education	Engineer-ing	Fine Arts	Foreign Language	Row Total %
Less than High School	N	1	2	1	0	6	53	6	5	51	14	2	197
	Row %	0.5	1.0	0.5	0.0	3.0	26.9	3.0	2.5	25.9	7.1	1.0	11.4
	Col %	10.0	7.4	4.3	0.0	9.2	13.6	7.6	33.3	12.5	18.7	3.3	
Completed High School	N	6	11	7	1	29	155	36	6	181	28	24	720
	Row %	0.8	1.5	1.0	0.1	4.0	21.5	5.0	0.8	25.1	3.9	3.3	41.8
	Col %	60.0	40.7	30.4	100.0	44.6	39.7	45.6	40.0	44.3	37.3	39.3	
Business or Trade School	N	2	9	12	0	14	97	23	4	96	18	27	440
	Row %	0.5	2.0	2.7	0.0	3.2	22.0	5.2	0.9	21.8	4.1	6.1	25.6
	Col %	20.0	33.3	52.2	0.0	21.5	24.9	29.1	26.7	23.5	24.0	44.3	
Completed College	N	0	3	2	0	13	55	10	0	49	9	4	233
	Row %	0.0	1.3	0.9	0.0	5.6	23.6	4.3	0.0	21.0	3.9	1.7	13.5
	Col %	0.0	11.1	8.7	0.0	20.0	14.1	12.7	0.0	12.0	12.0	6.6	
More than 4 Years	N	1	2	1	0	3	30	4	0	32	6	4	131
	Row %	0.8	1.5	0.8	0.0	2.3	22.9	3.1	0.0	24.4	4.6	3.1	7.6
	Col %	10.0	7.4	4.3	0.0	4.6	7.7	5.1	0.0	7.8	8.0	6.6	
Column Total		10	27	23	1	65	390	79	15	409	75	61	1721
	%	0.6	1.6	1.3	0.1	3.8	22.7	4.6	0.9	23.8	4.4	3.5	100.0

Table 35 (continued)

		Health	Home Economics	Law	Letters	Library Science	Mathematics	Physical Science	Psychology	Public Affairs	Social Science	Interdisciplinary	Row Total %
Less than High School	N	7	3	0	1	0	1	2	9	14	18	1	197
	Row %	3.6	1.5	0.0	0.5	0.0	0.5	1.0	4.6	7.1	9.1	0.5	11.4
	Col %	8.9	11.5	0.0	2.9	0.0	7.7	5.0	12.7	10.9	11.5	6.3	
Completed High School	N	29	7	1	15	0	7	18	29	57	66	7	720
	Row %	4.0	1.0	0.1	2.1	0.0	1.0	2.5	4.0	7.9	9.2	1.0	41.8
	Col %	36.7	26.9	100.0	44.1	0.0	53.8	45.0	40.8	44.2	42.3	43.8	
Business or Trade School	N	14	8	0	11	0	3	14	19	28	34	7	440
	Row %	3.2	1.8	0.0	2.5	0.0	0.7	3.2	4.3	6.4	7.7	1.6	25.6
	Col %	17.7	30.8	0.0	32.4	0.0	23.1	35.0	26.8	21.7	21.8	43.8	
Completed College	N	18	6	0	7	1	1	3	7	21	23	1	233
	Row %	7.7	2.6	0.0	3.0	0.4	0.4	1.3	3.0	9.0	9.9	0.4	13.5
	Col %	22.8	23.1	0.0	20.6	100.0	7.7	7.5	9.9	16.3	14.7	6.3	
More than 4 Years	N	11	2	0	0	0	1	3	7	9	15	0	131
	Row %	8.4	1.5	0.0	0.0	0.0	0.8	2.3	5.3	6.9	11.5	0.0	7.6
	Col %	13.9	7.7	0.0	0.0	0.0	7.7	7.5	9.9	7.0	9.6	0.0	
Column Total		79	26	1	34	1	13	40	71	129	156	16	1721
	%	4.6	1.5	0.1	3.0	0.1	0.8	2.3	4.1	7.5	9.1	0.9	100.0

Chi Square = 96.01408 with 84 Degrees of Freedom
Significance = 0.1747

Table 36

Relationship of Father's Occupation and University Program

		Agriculture	Architecture	Area Studies	Biology	Business	Communications	Computer Science	Education	Engineering	Fine Arts	Foreign Language	Row Total %
Manual Work, Service Work, Labor, Housewife	N	0	1	0	3	15	2	1	17	2	0	0	74
	Row %	0.0	1.4	0.0	4.1	20.3	2.7	1.4	23.0	2.7	0.0	0.0	4.3
	Col %	0.0	4.2	0.0	4.7	3.8	2.6	6.7	4.1	2.6	0.0	0.0	
Clerical, Sales Work	N	4	2	1	5	47	7	2	43	5	6	1	175
	Row %	2.3	1.1	0.6	2.9	26.9	4.0	1.1	24.6	2.9	3.4	0.6	10.1
	Col %	15.4	8.3	100.0	7.8	12.0	9.2	13.3	10.5	6.4	9.8	10.0	
Skilled Work	N	7	3	0	24	127	20	3	152	40	18	3	556
	Row %	1.3	0.5	0.0	4.3	22.8	3.6	0.5	27.3	7.2	3.2	0.5	32.1
	Col %	26.9	12.5	0.0	37.5	32.3	26.3	20.0	37.0	51.3	29.5	30.0	
Self-employed	N	7	13	0	15	107	19	4	102	13	24	3	492
	Row %	1.4	2.6	0.0	3.0	21.7	3.9	0.8	20.7	2.6	4.9	0.6	28.4
	Col %	26.9	54.2	0.0	23.4	27.2	25.0	26.7	24.8	16.7	39.3	30.0	
Professional	N	8	5	0	17	97	28	5	97	18	13	3	433
	Row %	1.8	1.2	0.0	3.9	22.4	6.5	1.2	22.4	4.2	3.0	0.7	25.0
	Col %	30.8	20.8	0.0	26.6	24.7	26.8	33.3	23.6	23.1	21.3	30.0	
Column Total		26	24	1	64	393	76	15	411	78	61	10	1730
	%	1.5	1.4	0.1	3.7	22.7	4.4	0.9	23.8	4.5	3.5	0.6	100.0

Table 36 (continued)

		Health	Home Economics	Law	Letters	Library Science	Mathe-matics	Physical Science	Psy-chology	Public Affairs	Social Science	Interdis-ciplinary	Row Total %
Manual Work, Service Work, Labor, House-wife	N	4	0	0	1	0	0	2	5	10	10	1	74
	Row %	5.4	0.0	0.0	1.4	0.0	0.0	2.7	6.8	13.5	13.5	1.4	4.3
	Col %	5.1	0.0	0.0	2.9	0.0	0.0	4.9	6.9	7.7	6.5	5.9	
Clerical, Sales Work	N	7	6	0	5	0	1	3	6	12	10	2	175
	Row %	4.0	3.4	0.0	2.9	0.0	0.6	1.7	3.4	6.9	5.7	1.1	10.1
	Col %	8.9	23.1	0.0	14.3	0.0	7.1	7.3	8.3	9.2	6.5	11.8	
Skilled Work	N	21	5	1	8	1	3	14	20	39	46	1	556
	Row %	3.8	0.9	0.2	1.4	0.2	0.5	2.5	3.6	7.0	8.3	0.2	32.1
	Col %	26.6	19.2	100.0	22.9	100.0	21.4	34.1	27.8	30.0	29.7	5.9	
Self-employed	N	21	10	0	11	0	8	9	25	40	51	10	492
	Row %	4.3	2.0	0.0	2.2	0.0	1.6	1.8	5.1	8.1	10.4	2.0	28.4
	Col %	26.6	38.5	0.0	31.4	0.0	57.1	22.0	34.7	30.8	32.9	58.8	
Professional	N	26	5	0	10	0	2	13	16	29	38	3	433
	Row %	6.0	1.2	0.0	2.3	0.0	0.5	3.0	3.7	6.7	8.8	0.7	25.0
	Col %	32.9	19.2	0.0	28.6	0.0	14.3	31.7	22.2	22.3	24.5	17.6	
Column Total		79	26	1	35	1	14	41	72	130	155	17	1730
	%	4.6	1.5	0.1	2.0	0.1	0.8	2.4	4.2	7.5	9.0	1.0	100.0

Chi Square - 103.92255 with 84 Degrees of Freedom
Significance - 0.[illegible]673

Table 37

Relationship of Mother's Occupation and University Program

		Agri-culture	Archi-tecture	Area Studies	Biology	Business	Communi-cations	Computer Science	Education	Engineer-ing	Fine Arts	Foreign Language	Row Total %
Manual Work, Service Work, Labor, Housewife	N	11	11	0	35	161	32	8	164	29	26	5	698
	Row %	1.6	1.6	0.0	5.0	23.1	4.6	1.1	23.5	4.2	4.0	0.7	40.2
	Col %	40.7	45.8	0.0	55.6	40.6	42.1	53.3	39.4	37.7	49.1	50.0	
Clerical, Sales Work	N	9	7	1	16	139	29	3	125	25	15	2	549
	Row %	1.6	1.3	0.2	2.9	25.3	5.3	0.5	22.8	4.6	2.7	0.4	31.6
	Col %	33.3	29.2	100.0	25.4	35.0	38.2	20.0	30.0	32.5	26.3	20.0	
Skilled Work	N	0	1	0	2	30	1	1	34	9	3	2	121
	Row %	0.0	0.8	0.0	1.7	24.8	0.8	0.8	28.1	7.4	2.5	1.7	7.0
	Col %	0.0	4.2	0.0	3.2	7.6	1.3	6.7	8.2	11.7	5.3	20.0	
Self-employed	N	1	2	0	1	16	3	2	12	3	3	1	69
	Row %	1.4	2.9	0.0	1.4	23.2	4.3	2.9	17.4	4.3	4.3	1.4	4.0
	Col %	3.7	8.3	0.0	1.6	4.0	3.9	13.3	2.9	3.9	5.3	10.0	
Professional	N	6	3	0	9	51	11	1	81	11	8	0	298
	Row %	2.0	1.0	0.0	3.0	17.1	3.7	0.3	27.2	3.7	2.7	0.0	17.2
	Col %	22.2	12.5	0.0	14.3	12.8	14.5	6.7	19.5	14.3	14.0	0.0	
Column Total		27	24	1	63	397	76	15	416	77	57	10	1735
	%	1.6	1.4	0.1	3.6	22.9	4.4	0.9	24.0	4.4	3.3	0.6	100.0

Table 37 (continued)

		Health	Home Economics	Law	Letters	Library Science	Mathematics	Physical Science	Psychology	Public Affairs	Social Science	Interdisciplinary	Row Total %
Manual Work, Service Work, Labor, Housewife	N	24	9	0	17	0	7	14	32	51	51	9	698
	Row %	3.4	1.3	0.0	2.4	0.0	1.0	2.0	4.6	7.3	7.3	1.3	40.2
	Col %	30.4	34.6	0.0	48.6	0.0	53.8	34.1	45.1	38.9	32.3	56.3	
Clerical, Sales Work	N	30	6	1	8	0	4	14	13	42	58	2	549
	Row %	5.5	1.1	0.2	1.5	0.0	0.7	2.6	2.4	7.7	10.6	0.4	31.6
	Col %	38.0	23.1	100.0	22.9	0.0	30.8	34.1	18.3	32.1	36.7	12.5	
Skilled Work	N	3	1	0	5	0	1	2	6	9	10	1	121
	Row %	2.5	0.8	0.0	4.1	0.0	0.8	1.7	5.0	7.4	8.3	0.8	7.0
	Col %	3.8	3.8	0.0	14.3	0.0	7.7	4.9	8.5	6.9	6.3	6.3	
Self-employed	N	4	1	0	0	0	0	2	4	4	10	0	69
	Row %	5.8	1.4	0.0	0.0	0.0	0.0	2.9	5.8	5.8	14.5	0.0	4.0
	Col %	5.1	3.8	0.0	0.0	0.0	0.0	4.9	5.6	3.1	6.3	0.0	
Professional	N	18	9	0	5	1	1	9	16	25	29	4	298
	Row %	6.0	3.0	0.0	1.7	0.3	0.3	3.0	5.4	8.4	9.7	1.3	17.2
	Col %	22.8	34.6	0.0	14.3	100.0	7.7	22.0	22.5	19.1	18.4	25.0	
Column Total		79	26	1	35	1	13	41	71	131	158	16	1735
	%	4.6	1.5	0.1	2.0	0.1	0.7	2.4	4.1	7.6	9.1	0.9	100.0

Chi Square = 89.28165 with 84 Degrees of Freedom
Significance = 0.3298

work in excess of 30 hours a week. Similarly, 48.1% of the transfer students planned to work in excess of 30 hours a week. The nontransfer and transfer group, therefore, differed by less than 2%. The data supported the conclusion that the students' plan to work had no practical significance in relation to transfer.

Table 39 shows the relationship of family yearly income and the students projected salary for the 12-month period following community college graduation for the nontransfer group. This was determined by projecting the students' first quarter earnings through 12 months.

The relationship was not significant at the .05 level. The table shows that 44.2% of the nontransfer group reported no earnings for the period described, and 53.4% had projected earnings of less than 6,000 dollars.

These data do not support the conclusion that outside employment and the economic consideration of substantial earnings were important considerations in the transfer decision.

Table 40 shows the relationship between projected yearly earnings and family income for the transfer group.

Using a Chi Square statistical test, the relationship was not found to be significant at the .05 level. Each family income level had in excess of 50% of the students with no projected earnings. Also, more than 40% of the students in any family income category had projected earnings of less than 6,000 dollars. These data show work patterns and projected yearly earnings not to be significantly related to the socioeconomic measure of family income.

Table 38

Relationship of Student's Plan to Work While Continuing Education and Transfer

		Do Not Plan To	Less Than 5 Hours A Week	Less Than 10 Hours A Week	Less Than 20 Hours A Week	Less Than 30 Hours A Week	More Than 30 Hours
Non Transfer							
	N	258	59	157	395	227	81
	Row %	21.9	5.0	13.3	33.6	19.3	6.9
	Col %	43.7	46.1	42.1	40.6	37.8	51.9
Transfer							
	N	332	69	216	579	374	75
	Row %	20.2	4.2	13.1	35.2	22.7	4.6
	Col %	56.3	53.9	57.9	59.4	62.2	48.1
	Column Total	590	128	373	974	601	156
	%	20.9	4.5	13.2	34.5	21.3	5.5

Chi Square = 13.08755 with 5 degrees of Freedom
Significance = 0.0226
Missing Observations = 350

Table 39

Relationship of Projected Yearly Earnings and Family Income for the Non-Transfer Group

		Family Income					
Projected Earnings		0 to 599	6000 to 8999	9000 to 11999	12000 to 14999	15000 and over	Row Total
0	N	66	87	110	103	155	521
	Row %	12.7	16.7	21.1	19.8	29.8	44.2
	Col %	47.5	43.3	37.5	41.4	52.4	
1 to 5,999	N	69	107	175	143	135	629
	Row %	11.0	17.0	27.8	22.7	21.5	53.4
	Col %	49.6	53.2	59.7	57.4	45.6	
6,000 to 8,999	N	2	3	5	1	2	13
	Row %	15.4	23.1	38.5	7.7	15.4	1.1
	Col %	1.4	1.5	1.7	0.4	0.7	
9,000 to 11,999	N	1	1	3	2	1	8
	Row %	12.5	12.5	37.5	25.0	12.5	0.7
	Col %	0.7	0.5	1.0	0.8	0.3	
12,000 to 14,999	N	0	1	0	0	1	2
	Row %	0.0	50.0	0.0	0.0	50.0	0.2
	Col %	0.0	0.5	0.0	0.0	0.3	
15,000 and Over	N	1	2	0	0	2	5
	Row %	20.0	40.0	0.0	0.0	40.0	0.4
	Col %	0.7	1.0	0.0	0.0	0.7	
	Column Total	139	201	293	249	296	1178
	%	11.8	17.1	24.9	21.1	25.1	100.0

Chi Square = 26.56566 with 20 Degrees of Freedom
Significance = 0.1479

Table 40

Relationship of Projected Yearly Earnings and Family Income for the Transfer Group

Projected Earnings		Family Income: 0 to 5999	6000 to 8999	9000 to 11999	12000 to 14999	15000 and over	Row Total
0	N	83	131	186	168	271	839
	Row %	9.9	15.6	22.2	20.0	32.3	52.8
	Col %	51.9	50.2	50.8	51.1	57.3	
1 to 5,999	N	77	127	177	161	198	740
	Row %	10.4	17.2	23.9	21.8	26.8	46.6
	Col %	48.1	48.7	48.4	48.9	41.9	
6,000 to 8,999	N	0	2	1	0	3	6
	Row %	0.0	33.3	16.7	0.0	50.0	0.4
	Col %	0.0	0.8	0.3	0.0	0.6	
9,000 to 11,999	N	0	1	2	0	0	3
	Row %	0.0	33.3	66.7	0.0	0.0	0.2
	Col %	0.0	0.4	0.5	0.0	0.0	
12,000 to 14,999	N	0	0	0	0	1	1
	Row %	0.0	0.0	0.0	0.0	100.0	0.1
	Col %	0.0	0.0	0.0	0.0	0.2	
Column Total		160	261	366	329	473	1589
	%	10.1	16.4	23.0	20.7	29.8	100.0

Chi Square = 16.85785 with 16 Degrees of Freedom
Significance = 0.3949

Summary

Analyses of these data have resulted in the following observations;

1. Low SES students were represented in the graduated and transferred student groups in proportion to their representation among the high school graduate population as measured by the Florida Twelfth Grade Test.
2. Low SES students were proportionally represented among the group of students selecting a senior university outside their geographic area.
3. Low SES students were not restricted in their choice of various university curricula.
4. Low SES students were not influenced to change their educational objective downward (based on years of education required).
5. Low SES students who would not have been eligible at the time of high school graduation (based on Twelfth Grade Test scores), were provided an opportunity to enter a senior university.
6. Low SES students were not adversely affected by outside employment in relation to transfer.

These observations do not support the major criticism that community colleges are not extending the democratization of education.

CHAPTER IV

SUMMARY, CONCLUSIONS AND IMPLICATIONS

This study identified criticisms of community colleges fulfillment of their role in democratization of education. The validity of these criticisms was then studied by determining the extent 15 Florida community colleges had fulfilled this role. Data were collected and answers to the following questions were supplied:

1. What is the extent of representation of low SES students in community colleges in Florida?

2. What is the relationship between SES and completion of the students stated educational objective?

3. What is the relationship between student SES and;
    a. transfer to a senior university?
    b. transfer to a senior university within 50 miles of home?
    c. enrollment in the various curricula within the university?

4. What is the relationship between student SES, employment and transfer to a senior university?

The information collected was then related to the original criticism identified by a review of literature.

This study showed graduated community college students to be representative of high school students in general when compared on the basis of socioeconomic status measures of family income, parental schooling and parental occupation reported on the Florida Twelfth Grade Test. The majority of graduated students of low socioeconomic status, however, were concentrated in community colleges serving metropolitan areas.

A major thrust of this study was to determine the extent community colleges were extending educational opportunity to low SES students by facilitating their transfer to a senior university. Data supplied by the study supported the conclusion that SES was not related in a practical magnitude to students' continuing their education after graduation from Florida community colleges. For all family income levels it was found that over 50% of the community college graduates continued their education by transferring to a senior university. The nontransfer and transfer groups were significantly different in relation to parental schooling and occupational levels. Within each level of the various socioeconomic status measures, however, over 50% of the students continued their education. The study also showed using Florida Twelfth Grade Test achievement scores data, that the community colleges were effective in facilitating the transfer of students who would not have been eligible for admission to a Florida senior university at the time of their high school graduation.

Data analyzed in the study indicated that the graduated students had generally completed their stated educational objectives equally as frequently in each SES category. Low socioeconomic students were shown to have no practical restriction on their choice of curricula after transfer. Data did not support the criticism that community colleges were influential in changing the students' educational goal. The majority of all the graduates in the research group elected curricula in business or education after graduation. These data were consistent with data supplied by the Florida Division of Community Colleges relative to all community college transfer students.

Data provided in the study do not support the conclusion that the students' plan to work (as indicated on the Florida Twelfth Grade Test) or their actual employment had any practical significance in relation to transfer.

The results of data analysis of graduated students of 15 selected Florida community colleges did not support the general criticisms that community colleges are not fulfilling their role in extending the democratization of educaion. In this study it was shown that;

1. Low SES students were proportionally represented among community college graduates,

2. Low SES students continued their education at a senior university in proportion to the numbers that graduated,

3. Low SES did not restrict achievement of desired educational goal or participation in the various curricula in the university.

The findings of this study may differ from those previously reported and from which the original criticisms were drawn for a variety of reasons. This study was limited to a research group of recent high school graduates who entered the community college immediately upon graduation or shortly thereafter. It did not include older students or students who returned to the community college after a period of outside employment. Thus the data were more typical of first time college students in general.

The research group in this study also came from a state with an extensive system of community colleges with an articulation agreement which facilitates transfer between public community colleges and state universities.

The literature from which the selected criticisms were drawn reported the results of previous studies and did not include the presentation of the data. Results were reported as being statistically significant and the authors then drew various conclusions. This does not provide the opportunity for the reader to make the distinction between results which were statistically significant and results which had practical value. Therefore, the criticisms could be a reflection of the authors' bias.

This study was concerned with providing information which would determine the validity of certain criticism relative to the role of community colleges in providing educational opportunity and opportunity for social mobility for low SES students.

Further research is needed on the university academic success of low SES students who transferred from community colleges in order to determine the full value of the community college experience.

For the nontransfer group extensive study is also needed. Further study is needed to determine the value of a two year degree in relation to economic gain and social mobility.

APPENDIX A

FLORIDA TWELFTH GRADE TEST STUDENT QUESTIONNAIRE AND 1973 SUMMARY DATA

Florida Statewide Twelfth Grade Testing Program
Sponsored by the
University of Florida, Gainesville

STUDENT QUESTIONNAIRE

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STUDENT QUESTIONNAIRE

In this questionnaire you will be asked for certain information about your background, attitudes, and plans for the future. This questionnaire is not a test. The only "right" answers are those that reflect your own experiences and goals.

The responses of groups of students to these questions will be summarized and sent to high schools, colleges, and other educational agencies. The information provided will be important to them in planning programs to meet Florida's educational needs.

You are encouraged to answer these questions as best you can. However, the questionnaire is voluntary. You do not need to respond to it in order to take the tests. If you choose, you may omit the entire questionnaire or any individual questions.

To answer each question of the questionnaire, first read the question and the alternative responses. Choose the response that is best for you and blacken the corresponding circle in the Questionnaire Section of your answer sheet. All your responses are to be marked on the separate answer sheet.

Part 1: High School Type, Program, Activities

1. What type of high school are you now attending?
   - (A) Public
   - (B) Private, nonreligious, nonmilitary
   - (C) Denominational other than Catholic
   - (D) Catholic
   - (E) Military
   - (F) Adult education or GED (high school equivalency) diploma course
   - (G) Other

2. About how many students are there in your high school graduating class?
   - (A) Fewer than 50
   - (B) 50-199
   - (C) 200-499
   - (D) 500-999
   - (E) 1,000 or more

3. Which of the following best describes the high school program in which you are enrolled?
   - (A) Agriculture
   - (B) Business or commercial
   - (C) College preparatory or academic
   - (D) Home economics
   - (E) Vocational or industrial arts
   - (F) General

4. Of the subjects listed below, which one do you enjoy most in high school?
   - (A) Art
   - (B) Commercial or secretarial studies
   - (C) English (including speech and literature)
   - (D) Foreign language(s)
   - (E) Home economics
   - (F) Industrial arts (for example, woods, metals, mechanical drawing)
   - (G) Mathematics
   - (H) Music
   - (I) Physical education
   - (J) Sciences (for example, physics, biology)
   - (K) Social sciences (for example, history, civics)
   - (L) Vocational (for example, automobile mechanics, cosmetology, computer programming, television repair, agriculture)

Questions 5 through 10 concern the total years of study you expect to complete in certain high school subjects. Count only those courses you have taken since beginning the ninth grade and those you will complete before graduation from high school. (If you have completed less than one full year in a subject, answer as if you have completed a full year.) For each question, mark letter

- (A) if you did not take any courses in the subject;
- (B) if you took one year or the equivalent;
- (C) if you took two years or the equivalent;
- (D) if you took three years or the equivalent;
- (E) if you took four years or the equivalent;
- (F) if you took more than four years in the subject.

5. English
6. Mathematics
7. Biological sciences (for example, biology, botany, physiology)
8. Physical sciences (for example, chemistry, geology, physics)
9. Social studies (for example, civics, economics, history)
10. Foreign languages

Questions 11 through 19 concern your participation in certain activities. For each activity, mark letter

- (N) if you do not participate;
- (P) if you participate but not very actively;
- (A) if you participate very actively.

11. Church activities
12. Student government
13. Literary, public speaking, debating, or dramatic activities
14. Athletics
15. Special interest groups (for example, Future Teachers of America, Science Club, Camera Club, Motorcycle Club, Auto Mechanics Club, Computer Programming Club)
16. School spirit activities (for example, rally committee, welcoming committees)
17. Neighborhood youth groups
18. Social clubs
19. Public service activities (for example, work in poverty areas, environmental improvement action)

Part 2: Biographical Information

20. How do you describe yourself?

(A) American Indian
(B) Black, Afro-American, Negro
(C) White, Caucasian
(D) Mexican-American
(E) Puerto Rican
(F) Cuban
(G) Spanish-American, not listed in above categories
(H) Oriental
(I) Other

21. How much schooling did your parents (or guardians) have? Indicate only the highest level. (Mark only one for each parent.)

Father	Mother	
(A)	(A)	No formal schooling
(B)	(B)	Some elementary school
(C)	(C)	Finished elementary school
(D)	(D)	Some high (secondary) school
(E)	(E)	Finished high (secondary) school
(F)	(F)	Business or trade school
(G)	(G)	Some college
(H)	(H)	Finished college (four years)
(I)	(I)	Attended graduate or professional school (for example, law or medical school) but did not attain a graduate or professional degree
(J)	(J)	Attained a graduate or professional degree (M.A., Ph.D., M.D., etc.)
(K)	(K)	I don't know.

22. Blacken the circle under YOU that goes with the best description of the kind of work that you would like to do. Blacken the circle under FATHER that goes with the work your father (or male guardian) does. Blacken the circle under MOTHER that goes with the work your mother (or female guardian) does. The exact job may not be listed, but blacken the one that comes closest. If either of your parents (or guardians) is out of work, disabled, or retired, blacken the kind of work he or she used to do. (Mark only one for YOU, one for FATHER, and one for MOTHER.)

You	Father	Mother	
(A)	(A)	(A)	Skilled Work: such as chef, carpenter, factory foreman, baker, machine operator, electrician, enlisted man in the armed forces, mechanic, bus driver, truck driver, meat cutter, plumber, repairman, nurse's aide, bartender, barber, beautician
(B)	(B)	(B)	Manual Labor, Factory Work, Service, or Household Work: such as filling station attendant, longshoreman, maid, waiter
(C)	(C)	(C)	Clerical or Sales Work: such as bank teller, bookkeeper, salesclerk, real estate salesman, secretary, stenographer, typist, receptionist, keypunch operator, switchboard operator
(D)	(D)	(D)	Civil Service Work: such as policeman, fireman, postman
(E)	(E)	(E)	Homemaking
(F)	(F)	(F)	Self-employed or Business Management: such as business manager, store owner, store or office manager, sales manager, contractor, executive in a large company, government official
(G)	(G)	(G)	Professional or Technical Work: such as minister, accountant, dentist, engineer, doctor, lawyer, teacher, medical technician, librarian, nurse, pharmacist, social worker, computer programmer, officer in the armed forces
(H)	(H)	(H)	I don't know.

23. Do your parents (or guardians) expect you to continue your education beyond high school?
    - (A) Yes
    - (B) No
    - (C) I don't know.

24. Do you support yourself?
    - (A) Yes, completely
    - (B) Yes, partially
    - (C) No

25. How many children in your family are still financially supported by your parents (or guardians)?
    - (A) None
    - (B) One
    - (C) Two
    - (D) Three
    - (E) Four
    - (F) Five or more

26. What is the best estimate of your family's income?
    - (A) Less than $3,000 a year (about $60 a week or less)
    - (B) Between $3,000 and $5,999 a year (from $60 to $119 a week)
    - (C) Between $6,000 and $7,499 a year (from $120 to $149 a week)
    - (D) Between $7,500 and $8,999 a year (from $150 to $179 a week)
    - (E) Between $9,000 and $10,499 a year (from $180 to $209 a week)
    - (F) Between $10,500 and $11,999 a year (from $210 to $239 a week)
    - (G) Between $12,000 and $13,499 a year (from $240 to $269 a week)
    - (H) Between $13,500 and $14,999 a year (from $270 to $299 a week)
    - (I) Between $15,000 and $18,000 a year (from $360 to $359 a week)
    - (J) Over $18,000 a year (about $360 a week or more)

Part 3: Plans for Further Education

27. Do you plan to continue your education after high school?
    - (A) I have not decided yet.
    - (B) No, I am certain that I do not want to continue.
    - (C) Yes, in the armed forces
    - (D) Yes, by on-the-job training
    - (E) Yes, in a business school
    - (F) Yes, in a 4-year college
    - (G) Yes, in a 2-year college
    - (H) Yes, in a vocational-technical or trade school
    - (I) Yes, in a school of nursing
    - (J) Yes, in some way not listed above

If you chose E, F, G, H, or I, continue with Question 28.

If you chose A, B, C, D, or J, skip to Question 45 in Part 4.

28. When do you plan to continue your education after high school?
    - (A) Right after graduation
    - (B) A year or two after graduation
    - (C) I don't know.

29. Will you have any brothers and/or sisters continuing their education after high school at the same time you are?
    - (Y) Yes
    - (N) No

30. Will you need help in getting money to pay for continuing your education?
    - (A) No, with my parents' (or guardians') help I can pay for the education I want.
    - (B) No, with a job or with my savings, I can pay for the education I want.
    - (C) Yes, with my parents' (or guardians') help I can pay for some of the costs, but I would need more money.
    - (D) Yes, I will need money to pay for all of my expenses.
    - (E) I am not sure.

31. Do you plan to live at home while you continue your education?
    - (A) Yes, but only at the beginning of my educational program
    - (B) Yes, throughout the time it takes to complete my educational program
    - (C) No, I will live away from home.
    - (D) I am not sure.

32. What is the highest level of education you plan to complete?
    - (A) No specific plans for a degree or certificate
    - (B) A 1-year program
    - (C) A $1\frac{1}{2}$-year program
    - (D) A 2-year specialized training program (for example, electronics, nursing, laboratory technology)
    - (E) A 2-year liberal arts degree (for example, Associate of Arts)
    - (F) A 4-year college degree (Bachelor's degree)
    - (G) Master's degree
    - (H) Ph.D., M.D., or other professional degree
    - (I) Other

33. Will you be a full-time or part-time student?
    - (A) Full-time
    - (B) About three-quarters time
    - (C) About one-half time
    - (D) About one-quarter time or less

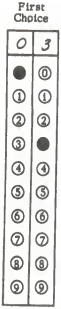
34. Do you plan to work while continuing your education? (Do not include work during vacations in your response.)
    - (A) No
    - (B) Yes, less than 5 hours a week
    - (C) Yes, more than 5 hours but less than 10 hours a week
    - (D) Yes, more than 10 hours but less than 20 hours a week
    - (E) Yes, more than 20 hours but less than 30 hours a week
    - (F) Yes, more than 30 hours a week

35. In choosing a school, which of the following considerations is most important to you?
    - (A) It is close to home.
    - (B) It has a good academic reputation.
    - (C) It is especially good in my chosen field.
    - (D) It is within my financial means without student financial aid.
    - (E) Its religious affiliation is important.
    - (F) It has a student financial aid program that would enable me to attend.
    - (G) I need to know more before I can make a choice.

36. On which one of the following do you think you want to place major emphasis for study?
    - (A) Agriculture (for example, forestry, floriculture, plant science, animal science)
    - (B) Biological sciences (for example, botany, predental, premedical, zoology)
    - (C) Black studies or Mexican-American studies
    - (D) Business (for example, accounting, business administration, marketing, finance, industrial management)
    - (E) Education (for example, elementary education, business education, physical education)
    - (F) Engineering (for example, chemical engineering, civil engineering, electrical engineering, mechanical engineering)
    - (G) Home economics (for example, dietetics, family and child development, nutrition, textiles and clothing)
    - (H) Humanities and arts (for example, English, fine arts, modern and classical foreign languages, journalism, music, philosophy, religion)
    - (I) Mathematics
    - (J) Nursing
    - (K) Physical sciences (for example, astronomy, biochemistry, chemistry, geology, physics)
    - (L) Social sciences (for example, economics, government, history, political science, prelaw, sociology, social work)
    - (M) Technical education (for example, medical technology, aeronautical technology, heating and refrigeration, metallurgical technology, data processing, radiology, oceanographic technology, food processing, television repair)
    - (N) Trade and industrial education (for example, barbering, drafting, cosmetology, interior decorating, photography, plumbing and pipefitting, carpentry, masonry, tool and die making, food services, tailoring, millwork and cabinetmaking)
    - (O) Something not listed above
    - (P) I don't know yet.

37. This question concerns your choice among schools that you might enter immediately after high school. In the list that follows, find the code numbers for your first choice, second choice, and third choice. Write these numbers on the answer sheet in the boxes under "First Choice," "Second Choice," and "Third Choice." Then blacken the corresponding circles under the boxes.

For example, if your first choice were Florida Atlantic University (code number 03), your answer sheet would be marked as follows:



The code numbers for second and third choices should be entered and blackened in the same way.

Code number 01 should be used for any college outside of Florida. (If all of your first three choices are colleges outside of Florida, you should enter and grid 01 in the response areas for each of the three choices.)

CODE NUMBERS FOR SCHOOLS

Code Number	School
01	Any School Outside of Florida
	PUBLIC UNIVERSITIES IN FLORIDA
02	Florida A & M University, Tallahassee
03	Florida Atlantic University, Boca Raton
04	Florida International University, Miami
05	Florida State University, Tallahassee
06	Florida Technological University, Orlando
07	University of Florida, Gainesville
08	University of North Florida, Jacksonville
09	University of South Florida, Tampa
10	University of West Florida, Pensacola
	PUBLIC JUNIOR COLLEGES IN FLORIDA
21	Brevard Community College
22	Broward Community College
23	Central Florida Community College
24	Chipola Junior College
25	Daytona Beach Community College
26	Edison Community College
27	Florida Junior College at Jacksonville
28	Florida Keys Community College
29	Gulf Coast Community College
30	Hillsborough Community College
31	Indian River Community College
32	Lake City Community College
33	Lake-Sumter Community College
34	Manatee Junior College
35	Miami-Dade Junior College (North Campus)
36	Miami-Dade Junior College (South Campus)
37	Miami-Dade Junior College (Downtown Campus)
38	North Florida Junior College
39	Okaloosa-Walton Junior College
40	Palm Beach Junior College
41	Pasco-Hernando Community College
42	Pensacola Junior College
43	Polk Community College
44	St. Johns River Community College
45	St. Petersburg Junior College, Clearwater
46	St. Petersburg Junior College, St. Petersburg
47	Santa Fe Junior College
48	Seminole Junior College
49	South Florida Junior College
50	Tallahassee Community College
51	Valencia Community College
60	Other (not listed above)

Code Number	PRIVATE FOUR-YEAR COLLEGES AND UNIVERSITIES IN FLORIDA
61	Barry College
62	Bethune-Cookman College
63	Biscayne College
64	Eckerd College (formerly Florida Presbyterian College)
65	Edward Waters College
66	Embry-Riddle Aero Institute
67	Florida Beacon College
68	Florida Institute of Technology
69	Florida Memorial College
70	Florida Southern College
71	Jacksonville University
72	Jones College, Jacksonville and Orlando
73	New College
74	Ringling School of Art
75	Rollins College
76	St. Leo College
77	Southeastern Bible College
78	Stetson University
79	University of Miami
80	University of Tampa
90	Other (not listed above)

Code Number	PRIVATE JUNIOR COLLEGES IN FLORIDA
91	Florida College, Temple Terrace
92	Marymount College
93	St. Joseph College
94	Webber College, Babson Park
99	Other (not listed above)

Questions 38 through 44 concern assistance you may want as you continue your education after high school. For each service, indicate whether you want it by marking (Y) for "yes" or (N) for "no."

38. Special help to increase reading speed and comprehension

39. Help in developing good study techniques

40. Help in finding part-time or full-time employment

41. Help in finding housing (either on-campus or off-campus)

42. Financial aid—loans, scholarships, etc.

43. Special counseling about educational and vocational plans and opportunities

44. Counseling about personal concerns

Part 4: Satisfaction with School

45. In general, do you find your courses interesting?
    - (A) Almost always
    - (B) Sometimes
    - (C) Almost never

46. In general, is the information you receive from your counselor based on your request for such information?
    - (A) Almost always
    - (B) Sometimes
    - (C) Almost never

47. If you have problems or questions, how soon can you usually see your counselor?
    - (A) Immediately
    - (B) Within a day
    - (C) After one day but before a week ends
    - (D) After a week but before a month ends
    - (E) After a month or more

Questions 48 through 65 concern your satisfaction with certain aspects of your school. For each question, mark letter

- (V) if you are very satisfied with this aspect of your school;
- (M) if you are moderately satisfied with this aspect of your school;
- (N) if you are not satisfied with this aspect of your school;
- (A) if not applicable to your school.

48. Teaching of current events
49. Library
50. Textbooks
51. Courses offered (areas available)
52. Special help with your school work
53. Guidance services
54. Transportation to and from school
55. Cafeteria or lunch facilities
56. Study halls
57. Class examinations
58. The grading system
59. Preparing you for your future
60. Flexibility in allowing you to choose your own objectives
61. The school newspaper
62. Social activities (dances, rallies)
63. Sports activities
64. Rules and regulations for students
65. Transportation to and from extracurricular activities

Questions 66 through 73 concern the frequency with which you have received information about certain topics from your school counselor or teachers. For each question, mark letter

- (F) if you have frequently received information on this topic;
- (O) if you have occasionally received information on this topic;
- (S) if you have seldom received information on this topic.

In addition, if you would like to learn more about the topic or discuss it further with your school counselor or teachers, mark letter (D) also.

66. College or college plans
67. Vocational school plans
68. Jobs or occupations after high school
69. Your high school work
70. Personal concerns
71. Future high school courses
72. Your performance on tests you have taken
73. Tests you could take to help you make decisions about your future

STOP

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STUDENT QUESTIONNAIRE SUMMARY DATA FOR SELECTED ITEMS, 1973

Item 21A Schooling of Father	N =	69375	%
	A	405	00
	B	2485	03
	C	2159	03
	D	10,779	15
	E	18,786	27
	F	4363	06
	G	9167	13
	H	9561	13
	I	1941	02
	J	4920	07
	K	4809	06

Item 21B Schooling of Mother	N =	69794	%
	A	227	00
	B	1150	01
	C	1471	02
	D	11,894	17
	E	27,579	39
	F	4409	06
	G	9140	13
	H	6876	09
	I	1686	02
	J	2158	03
	K	3204	04

Item 22B Work of Father	N =	68163	%
	A	24,895	36
	B	3533	05
	C	3701	05
	D	333	04
	E	176	00
	F	17,238	25
	G	12,750	18
	H	2545	03

Item 22C Work of Mother	N =	68302	%
	A	6357	09
	B	9073	13
	C	16,370	23
	D	660	00
	E	19,860	29
	F	4104	06
	G	8916	13
	H	2962	04

Summary Data (continued)

Item 26 Estimate of Family Income

	N = 63841	%
A	3431	05
B	6993	10
C	6508	10
D	5880	09
E	7243	11
F	6553	10
G	6342	09
H	4611	07
I	6294	09
J	9986	15

Item 27 Continue After High School

	N = 69874	%
A	10,887	15
B	2714	03
C	2387	03
D	1892	02
E	2247	03
F	27,867	39
G	11,977	17
H	4439	06
I	1790	02
J	3674	05

Item 32 Highest Level of Education Planned

	N = 54760	%
A	9371	17
B	1289	02
C	893	01
D	9131	16
E	2179	03
F	16,527	30
G	5395	09
H	7085	12
I	2890	05

Item 34 Plan to Work While Continuing

	N = 53586	%
A	10,702	19
B	3360	06
C	7447	13
D	13,727	25
E	12,072	22
F	6278	11

Summary Data (continued)

Item 36 Major Emphasis of Study

N =	52951	%
A	1516	02
B	3989	07
C	448	00
D	7217	13
E	3874	07
F	2929	05
G	1040	01
H	4538	08
I	1271	02
J	3274	06
K	1221	02
L	4447	08
M	3265	06
N	3117	05
O	6056	11
P	4749	08

APPENDIX B

RESEARCH GROUP DATA ELEMENTS, SOURCE AND VALUE

Source	Data Element	Value	N	%
Twelfth Grade Test Tapes				
	Family Income Level	0-5999	299	10.8
		6000-8999	462	16.7
		9000-11,999	659	23.8
		12,000-14,999	578	20.9
		15,000 and over	769	27.8
		Missing Observations =	401	
	Father's Schooling	Less than high school graduate	436	14.9
		Completed high school	773	26.4
		Business or trade school	760	25.9
		Completed college	544	18.5
		More than 4 years	420	14.3
		Missing Observations =	239	
	Mother's Schooling	Less than high school graduate	370	12.3
		Completed high school	1291	42.9
		Business or trade school	745	24.8
		Completed college	383	12.7
		More than 4 years	218	7.2
		Missing Observations =	165	
	Father's Occupation	Manual work, service work, labor, housewife	141	4.6
		Clerical work, sales work	272	8.9
		Skilled work, civil service work	1037	34.0
		Self-employed	855	28.0
		Professional, technical	746	24.5
		Missing Observations =	121	

Source	Data Element	Value	N	%
	Mother's Occupation	Manual work, service work, labor, housewife	1256	40.9
		Clerical work, sales work	946	30.8
		Skilled work, civil service work	231	7.5
		Self-employed	144	4.7
		Professional, technical	493	16.1
		Missing Observations =	102	
	Plan to Continue	Not Decided	125	4.0
		Do not want to continue	3	.1
		Armed Forces	20	.6
		On the job training	10	.3
		Business school	46	1.5
		4 year college	1749	56.2
		2 year college	925	29.7
		Vocational or trade school	58	1.9
		Nursing	96	3.1
	Highest Level of Education Planned	No specific plans	278	9.6
		1 year program	10	.3
		1½ year program	9	.3
		2 year program, A.S.	404	14.0
		2 year program, A.A.	140	4.8
		4 year program	1157	40.0
		Master's	395	13.7
		Ph.D.	413	14.3
		Other	85	2.9
	Major Emphasis of Study	Agriculture	28	1.7
		Biological Sciences	130	8.0
		Black Studies	1	.1
		Business	259	15.9
		Education	183	11.2
		Engineering	67	4.1
		Home Economics	22	1.3
		Humanities	164	10.0

Source	Date Element	Value	N	%
	Major Emphasis of Study (cont.)	Mathematics	44	2.7
		Nursing	52	3.2
		Physical Science	58	3.5
		Social Science	210	12.9
		Technical Education	81	5.0
		Trade and Industrial Education	31	1.9
		Something not listed	159	9.7
		Undecided	145	8.9
	Work While Continuing Education	Do not plan to	590	20.9
		Less than 5 hrs. week	128	4.5
		Less than 10 hrs. week	373	13.2
		Less than 20 hrs. week	974	34.5
		Less than 30 hrs. week	601	21.3
		More than 30 hrs.	156	5.5
	Test Score	0-99	130	4.1
		100-199	347	11.3
		200-299	786	24.8
		300-399	1124	35.4
		400 through highest	775	24.4
Board of Regents Data Tapes				
	University Program	Agriculture	25	1.5
		Architecture	23	1.4
		Area Studies	1	.1
		Biology	59	3.6
		Business	373	22.8
		Communications	72	4.4
		Computer Science	15	.9
		Education	391	23.9
		Engineering	74	4.5
		Fine Arts	52	3.2
		Foreign Language	10	.6
		Health	75	4.6
		Home Economics	21	1.3
		Letters	34	2.1
		Library Science	1	.1
		Mathematics	14	0.9
		Physical Science	38	2.3
		Psychology	68	4.2
		Public Affairs	122	7.5
		Social Science	151	9.2
		Interdisciplinary	15	0.9

Source	Date Element	Value	N	%
	Distance to Transfer University	Distance greater than 50 miles	882	55.5
		Distance less than 50 miles	707	44.5
Department of Commerce Data Tapes				
	Projected Yearly Earning (non-transfer)	0	521	44.2
		1-5999	629	53.4
		6000-8999	13	1.1
		9000-11,999	8	0.7
		12,000-14,999	2	0.2
		15,000 and over	5	0.4
	Projected Yearly Earning (transfer)	0	839	52.8
		1-5999	740	46.6
		6000-8999	6	0.4
		9000-11,999	3	0.2
		12,000-14,999	1	0.1

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James Almon Sawyer was born in Westboro, Massachusetts. He received a diploma from Westboro High School in 1963, graduated from Rollins College with a B. A. degree in sociology in 1967, and earned a M.Ed. degree in rehabilitation counseling from Florida State University in 1969.

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I certify that I have read this study and that in my opinion it conforms to acceptable standards of scholarly presentation and is fully adequate, in scope and quality, as a dissertation for the degree of Doctor of Philosophy.

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